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ORIGINAL ARTICLES.

COMPLETE BLINDNESS DUE TO ACUTE POISONING FROM OVER-USE OF JAMAICA GINGER; RECOVERY, FOLLOWED BY TOXIC AMBLYOPIA OF ORDINARY CHRONIC FORM, WITH EVENTUAL ATROPHY.*

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The case about to be reported presents several interesting points which may throw light upon or help to confirm some of our ideas on the subject of toxic amblyopias.

J. R., a sailor, 32 years, related that his mother and father were both dead, from causes to him unknown. Had had the diseases of childhood, but had never suffered from any serious disease. He denied absolutely any venereal disease. He had never been a steady drinker, but from his occupation as a sailor would abstain from alcohol for several months at a time, on reaching shore going off on a spree for a couple of days two or three times in the course of a year. He had been moderate in the use of tobacco, smoking weekly about four ounces in a pipe. His eyesight had always been good until about December 22, 1896, when he came ashore from a cruise and with a party of friends, being unable to procure whiskey, got intoxicated with Jamaica ginger of the ordinary commercial kind sold in small country stores. This was taken, as whiskey is, with water. The man remained drunk for two days, estimating that during that time he took about a quart and a half of Jamaica ginger. On the following day the man's feelings were similar to those that ordinarily follow an alcoholic debauch, though greatly intensified. Among other things he suffered from headache, nausea and vomiting.

On the evening of the next day, the fourth from the first taking of the ginger, while lighting the lamp in the cabin the man noticed everything to be hazy and vision failing, together with some photophobia.

By the next morning he could not see a lighted match held directly before his eyes, but had peripheral vision sufficient for him to grope around. By the following morning, however, light-perception had absolutely disappeared, both central and peripheral, and blindness was complete. This condition lasted for seven days, when vision began gradually to return, first in the periphery of the field, the man finally being able to read large print with great difficulty.

The time that elapsed between the period of complete blindness and the recovery of vision the patient estimated at about four weeks. Matters remained thus stationary for three weeks, when vision

* Read before the Philadelphia County Medical Society, June 23, 1897.

again began to fail, now very slowly, until the present condition has been reached, three months and a half after taking the Jamaica ginger.

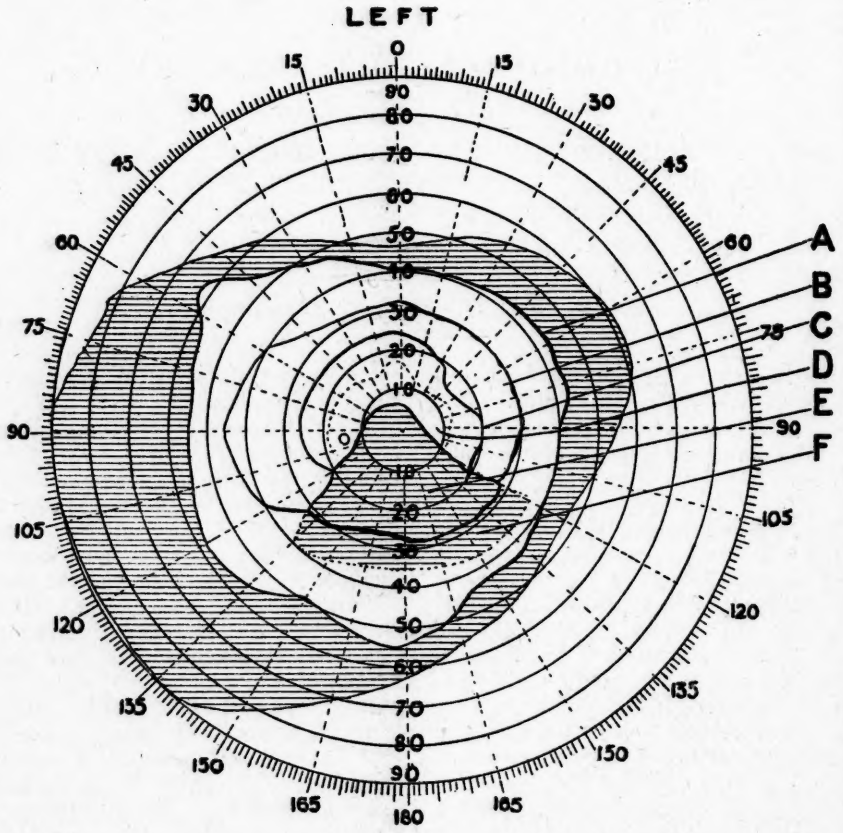
The anterior aspect of the eye is apparently normal, cornea and conjunctiva. The pupils are slightly dilated, but react both to light and in accommodation.

V = R. Fingers at 1 meter.
L. 1-100, eccentric.

logical cup and the absence of lymph from the vessels, showing the atrophy to be primary and not secondary to a previous papillitis.

There is no evidence of cerebral or spinal trouble (no locomotor ataxia or disseminated sclerosis) or hysteria.

The patient states that one of his friends, who accompanied him on his debauch, has also marked disturbance of



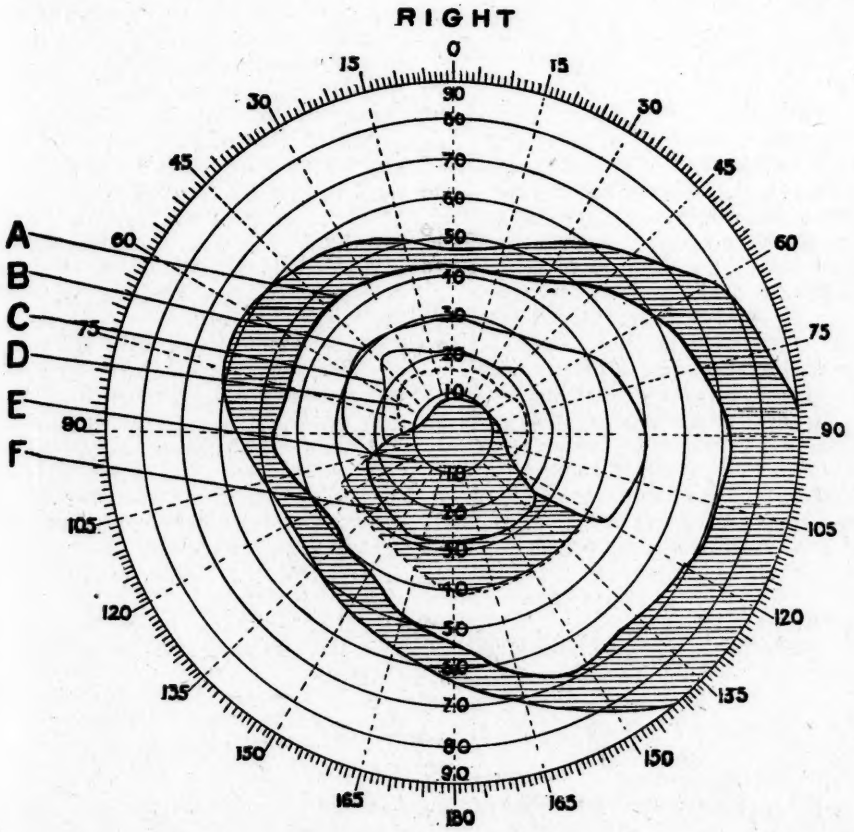
On ophthalmoscopic examination the media are found to be clear. The discs are exceedingly pale, the capillaries being almost entirely absent. The portion of the discs occupied by the papulo-macular bundle of fibers (forming the lower and outer quadrant) is completely atrophied and greenish-white in color.

The fundus of each eye is otherwise normal. There is a well-marked physiovision, though in less degree. Under treatment this entirely disappeared.

On questioning the man more closely some three months after I first saw him, he stated that since his visual loss he has heard of several other cases in which the sight was affected by drinking Jamaica ginger and that the practice of using this as a beverage is quite common in districts where it is difficult to procure alcohol.

The case presents thus several very interesting features:

1. The uncommon nature of the agent producing the poisoning.
2. The suddenness of the attack of complete blindness.
3. The peculiar changes in the fields which correspond most probably with the pathologic condition that takes place in the nerve.



There is a difference of opinion between authorities as to whether alcohol adulterated with certain substances is more or less liable to produce toxic amblyopia. However this may be, I think it is generally conceded by all that the cheapest and worst kinds of alcohol are more likely to bring about this condition.

I have been unable to procure a specimen of the kind of Jamaica ginger taken by the patient, which he describes, however, as being the ordinary commercial kind; so I wrote Professor Remington, of the Philadelphia College of Pharmacy, asking if he could inform me as to the ingredients contained. To my inquiries I received the following courteous reply:

"What is known as Jamaica ginger, or, more properly, essence of Jamaica ginger, is made in a very simple manner, by percolating the ground ginger-root with alcohol or alcohol containing water. The cheap trash found in country stores is often made with a portion of capsicum, in this way saving expense. You can see that a very little capsicum would take the place in pungency of a large quantity of ginger. Of course sufficient ginger would have to be used to give a flavor to the decoction. Then again if it is made hot with cayenne

pepper a weaker alcohol can be used, and this would cheapen the product very much."

From the suddenness of the blindness, the profound condition following and the history of several other men being affected, it would seem as if the presence of foreign materials in the spirit would be the more likely to cause amblyopia.

The fields are most interesting, as I think they clearly indicate the pathologic process that has taken place in the nerve.

FIELDS.

Description of fields:

A. Form field.

B. Blue field.

C. Red field.

D. Relative scotoma for red.

E. The heavily shaded portion, positive scotoma, both for form and color.

F. Lightly shaded portion relative scotoma (Form is perceived badly, i. e., white appears dirty, not clear, as in other portions of the field).

As no post-mortem examination has been reported in an acute case of this character, and as there is primary atrophy of the optic nerve, I take it that the following series of changes have taken place in the nerve: First, from the profound poisoning there resulted an acute interstitial retro-bulbar nervitis or effusion into the sheath of the nerve, affecting, as alcohol always does, the papulo-macular bundle of fibers and producing, most probably, at first a central scotoma, negative in character (that is, for colors and not for form), with the resulting blurring on the first day. As the neuritis or effusion increased and the pressure on the axis-cylinders became greater the scotoma gradually changed from negative to positive and finally became larger and larger until it spread over the entire field, causing complete blindness. After the seven days of blindness, as the neuritis or effusion subsided the pressure was relieved and vision gradually returned, with the exception of that effected through the papulo-macular bundle, which, owing to its depth in the nerve, was more seriously affected by the pressure. The renewed failure of vision after three weeks is to be attributed to a consecutive atrophy following upon the pressure exerted upon the axis-cylinders as a result of the neuritis. This sequence is clearly demonstrated by the interesting fields, showing the "breaking through of the scotoma" to finally meet the periphery of the field, indicating not only an atrophy of the macular bundle, but its extension to adjacent fibres. The portion of the field represented by the letter F shows that the fibres of this region have not undergone complete atrophy, but are damaged so that they will not respond with the same promptness to the vibrations of light as the other portions of the field.

SOME OF THE CAUSES DEFEATING THE PROPER PROGRESS OF THERAPEUTICS.*

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In the consideration of this subject, the question naturally arises as to whether or not there is a progress in therapeutics which, when compared with the advance in other departments of our art and science can properly be considered commensurate. The answer to such an inquiry can be most briefly and positively stated, and, with regret, is formulated in the negative, by a perusal of the latest standard works of reference. With few exceptions those diseases with which we are most frequently confronted, and which comprise the more common or prevalent, compel the realization of the fact that therapeutics cannot lay claim to much, when viewed from the standpoint of the physiologist, pathologist and surgeon.

Let us consider such a frequently encountered affection as acute croupous or lobar pneumonia. Its treatment to-day is still argued as it was decades ago, and the pages of volumes of reference, as well as the fiat from the professorial desk,

* Read before the Philadelphia County Medical Society, June 23, 1897.

teem with interrogations that should long ago have been definitely and positively settled, had the same careful and analytic study been instituted that characterizes research in other channels. Etiologically the almost exclusively mechanical interpretation of the circulatory function of the affected pulmonary lobe, if this is the only area diseased, which is submitted as an explanation for that peculiar exudate which it may here be remarked could not be caused by any interference, purely mechanical, with the venous or arterial side *in loco*—still obtains, and the advocates and adversaries of phlebotomy and the champions of aconite, tartar-emetic and veratrum viride all have disciples, who find the subject as completely unsolved by the tests of practice as it was a century ago. The average mortality of twenty-eight per cent., now as then, substantiates the fact that in this disease therapeutics has not progressed.

Why, in the light of the facts, are these incomplete teachings still perpetuated? The great frequency of this disease and the opportunities offered for lines of thought and investigation in channels dissociated from the traditional beliefs, when still surrounded by this circulatory infatuation, in spite of its almost incessantly demonstrated uselessness, should, at least, direct attention to the study of its treatment upon an entirely different basis. If there is one fact established about pneumonia, it certainly is that it is not, *per se*, an inflammation of the lung. It is unquestionably an expression of a trophic derangement, followed, it is true, secondarily, by inflammatory phenomena, and why therefore the early treatment should still center about the antiphlogistic notion is a question that can fittingly be propounded.

Syphilis will also serve as an illustration; its natural history, so to speak, affords a clinical picture so distinct that, even though its *materies morbi* is still in doubt, the ultimate outcome is comparatively easily prognosticated, and yet its therapeusis is still debated around the mercurial and non-mercurial methods and such sub-divisions thereof as the interrupted and continuous, mixed, and several other useless combinations and modifications, which, when carefully followed as to their results, disclose negatives that should long ago have relegated them to the oblivion they so well deserve. There is scarcely any affection which, if skilfully treated according to the rules that should be determined by the conditions obtaining in the individual sufferer, offers such promise of relief as this disease, and when the notions that are formuated in the terms already indicated will have been abandoned and a proper advance made in its therapeusis, the *psoriasis lingualis syphilitica* and other commonly seen lesions of the mucous membranes will cease to be so frequent in cases that have been discharged as cured but improperly treated as the result of these modified plans.

Pertussis, notwithstanding our ignorance of Afanassiew's bacillus, has recommended for its treatment, in the latest works issued by a prolific medical press, a host of pharmaceutic preparations, the trial of which long ago incontestably proved their impotence, and yet there is perpetuated, to the discredit of the most important department of our profession, such teaching.

If the treatment of the acute inflammatory troubles most commonly met is examined, what do we find? In simple acute laryngitis, quinin is advised in quantities for which a caution is deemed necessary in order not to add to the existing trouble aural and cerebral difficulties that would be decidedly worse than the affection to be treated. Are such absurdities unusual? Unfortunately they can be enumerated for too many diseases that long, ere this, should have ceased to be so managed.

As to the therapeutics of simple acute pleurisy, it suffices to point to the many instances of irreparably disabled victims, whose health has been damaged by a serious deformity resulting from changes of structure requiring an ultimate resort to surgery, necessitated by the consequences of a plan of treatment which advance in bacteriology and pathology has demonstrated to be no longer valid, and to rely upon applications, and the exhibition of absorbents which, over and over again have been proved to be almost useless, until an innocuous transudation has become the seat of retrograde changes, resulting in the development of a focus for

infection and destruction, does not contribute to the dignity of clinical medicine.

Well may the injunction, intimated in one of our most recent and reliable works of reference, be seriously contemplated, with a view of establishing treatment at least different from that which has and still prevails. "The *vis medicatrix naturae* is probably the chief remedial agent in many cases, non-rheumatic, in which (latter) cure takes place under the use of the salicylic compounds, potassium iodid or other specific drugs." It is better oftimes to do nothing, in so far as remedial agents are concerned, than to institute procedures about which if anything is known, the least and most that can be said is that no appreciable effects have been secured. To apparently be doing something and having as a result nothing lends to nothing a dignity and value dangerous to the integrity of the profession!

It is needless to further consume time with additional illustrations, and attention is directed to some of the causes operative in the maintenance of the situation just depicted. The most important factor doubtless is a lack of knowledge on the part of the profession of the natural course and termination of disease. Very meagre are the published facts governing this important theme, and teaching is conspicuous for the absence thereof, and consequently the clinician, no matter what plan of treatment is instituted, is incapable of recognizing whether or not morbid processes have been modified beneficially or injuriously.

Reflection upon this fact discovers much to account for the perpetuation of relatively valueless therapeusis. Dependence upon the goddess of fortune too commonly pacifies conscience and engenders a habit of thought and procedure pernicious to therapeutic progress. To such, at the bedside, the exhibition of almost anything, alone or in complex combination, suffices, so long as the patient continues to improve, and when this does not take place there is a consultation or a change of physicians resulting in a resort to some ridiculous "pathy" and such careless and defective therapeusis is crowned with a result just as good,or, more correctly speaking, just as bad from the one plan as the other.

Another cause is our materia medica. Why the brain of a student must be engaged, at the expense of energy and time that should be occupied in the acquisition of more valuable knowledge, in memorizing the name, habitat, natural order, preparations and doses of a lot of obsolete and useless drugs is a question not inopportune. Such substances as castoreum, camphoric acid, lactucarium, veratria, urethan, oxalic acid, geranium and an array of innumerable and superfluous preparations of even our standard drugs, should be relegated to regions remote and not be a cause for an anxiety in the green room, which, unfortunately, does not end there, but is in danger of inculcating a lack of confidence in medicines of value and unquestioned merit, frequently reaching far into later life.

Associated herewith is the congener pharmacy. The classification of drugs is based upon their especial and intrinsic or inherent properties, and as many are derived from the vegetable kingdom, and according to conditions there existing, they must of necessity be characterized by complexity of composition. Several active principles are contained in one crude drug, and according to the solubility of these in the medium employed in pharmacy do tinctures, infusions, decoctions, extracts alcoholic and aqueous, and the drug itself represent remedial agents from which it is impossible to obtain uniform, definite or specific results, and to look under these conditions for achievements in therapeutics which should be distinct and unmistakable is unreasonable.

Again, even the chief active principle, or that which classifies a drug, is present in such a varying percentage that it is impossible to prescribe any of these preparations, from this or that pharmacy, with precision and accuracy. Among several remedies, I have investigated the tincture and fluid and solid extracts of aconite root, and repeatedly found such variation in therapeutic power as to render it impossible to regulate the dose with the hope of securing anything like definite results. One tincture, by carefully graded increasing quantities was

found to be inert so far as physiologic phenomena were concerned until administered in doses of one fluidram. Is it any wonder, then, that these conditions, which obtain alike for *all* drugs thus derived, result in the abandonment of many most valuable remedies, and a consequent misinterpretation, not only of the virtue of remedial agents, but also of the modification of the natural course of disease, and consequently of therapeusis.

Our preparations should be assayed not chemically only, but both chemically and physiologically, for to secure a uniform standard of strength for organic alkaloidal derivatives by chemistry alone is, for obvious reasons, impracticable; hence the necessity for the physiologic. Another point, in a sense foreign to the profession, but no small factor in obstructing progress, is the unreliable pharmacist, but as this is somewhat beyond the subject-matter of these remarks, it will be dismissed with a passing notice.

Thus obtain conditions within our province to correct, which determine the existence of a now well-established custom, alike destructive to the integrity of clinical medicine, therapeutic progress and the art and science of pharmacy. Judging from the enormous manufacture and consumption of the many varieties of foods and the falsely designated diastasic products, the inference is fair that too commonly does the profession seek guidance for therapeutics from the pamphlet literature of this modern but evil institution. A diagrammatic illustration of an alleged microscopic field exactly demonstrates how a red blood-corpuscle opens its receptive channels at once to the chalybeate which, manufactured here or there, is dubbed a knight of peculiar and mysterious power.

Again, our trusted friend, cod-liver oil, which we know effects its truly beneficial influence upon metabolism when administered complete, is presented to us in such fragmentary and associated conditions, each one of which, according to this class of literature, is said to embody the virtues of its entirety as to largely result in the defeat of its purpose; and what has been said of this is applicable equally to many more of our medicines. The avidity with which the clinician grasps this is another illustration of an obstructive factor already mentioned.

The compressed disc is another evil and should be accorded a place befitting its true value. That such products render impracticable proper dosage and combination, and therefore defeat skilful and effective therapeusis, is obvious. A sadder sight, conspicuously sitting as judge over such customs cannot well be conjectured than that of the slowly and struggling convalescent being improperly nourished by one of these many products composed of cheap whisky, well diluted, mingled perhaps with a pretence of some proteid element and flavored with an essential oil and licorice; and yet it constitutes a type of that degenerate therapeusis which already has in a great measure supplanted the legitimate and taken the place of that well-trained, skilful and scientific practice that should be the purpose and highest achievement of the profession.

Some newspapers undertake to discuss, in a general way, and give advice on disease to individuals upon application. The whole plan and its tendencies are bad. For one reason, because it leads to loss of legitimate business on the part of medical practitioners. The doctor who is tempted into giving away his knowledge and advice in this way will find his patrons trying it on, just as they do the patent medicine, or the doctor's own prescription, which did a neighbor or relative so much good, and then they will tell their friends about it, and it will go the rounds, whether it does anyone else any good or not. Another reason that this practice is deleterious is the same as makes the patent medicine such an evil to the people, in that they are led to experiment upon themselves, while precious time is lost and the disease gains headway. Ninety-nine hundredths of the advice that is thus taken goes for naught, if it be not actually deleterious to the patient; and when used with what purports to be the qualified advice or sanction of the profession it lowers the popular esteem of that profession and breeds contempt.—*Cleveland Med. Gaz.*

COMMUNICATIONS.

THE TRUE PRINCIPLES ON WHICH THE MEDICAL PROFESSION SHOULD BE ASSOCIATED, AND THE CHARACTER OF THE RESULTANT ORGANIZATIONS.*

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At the onset of this discussion it is assumed that each member of our profession is educated in general science, literature, arts, philosophy, logic, the trend of human history, habits, customs, lives, so as to be able to comprehend the science and art of medicine; that on such foundation he has erected his professional knowledge and practical skill; that he bears an honorable personal and professional character, and is legally entitled to practice medicine. Only such should be admitted into the medical profession; all others are thieves and robbers, that have entered the fold by climbing over or crawling under the fence.

Within a few days the writer received requests from different points in the United States, asking his active effort towards the election of three individuals to the presidency in three important medical societies. In no case did the request indicate that any of these desired to give his brain, time, learning, influence, or money, for the purpose of making the society stronger, more prosperous, wiser, work more smoothly—in short, in neither case was there any evidence on the part of the aspirant of a desire to benefit the society. On the contrary, the reasons adduced were purely selfish, personal; thus, the first desired the position in order that his course in a factional contest might be vindicated; the second, that he might secure a coveted hospital appointment; the third wanted to advertise himself and thus enlarge his already great professional income.

Several years since a distinguished ex-president of this academy was asked to contribute to the value of a certain meeting. A curt refusal was given, accompanied with the explanation that work in this academy did not bring patients to his office. It is a fact worthy of remembrance that many who have secured official positions in medical societies go their selfish ways thereafter, and forget their obligations to promote the interests of that society which has honored them, proving beyond question that they never were true members of the same.

Such events as these are recalled to indicate the common violation of the first principle of professional organization, which may be stated thus:

1. Each member should seek the good of the entire organization equally with his own.

Strict observance of this principle would bind the members as with bands of steel; a society founded upon it could never be disintegrated; if it ever vanished it would only be with the passing breath of the last survivor.

But our organization might be composed of members having diverse ends in view, and so work at cross purposes, thus weakening the general effect; hence the second principle:

2. Every member of our organization would have but one supreme purpose—to relieve present human suffering and prevent its recurrence, an object worthy of the noblest endeavor.

But even with an organization of individuals seeking the good of all and animated by a single purpose, one thing is lacking, *viz.:*

3. The cordial coöperation of each member in all things relating to its one purpose. This means such a unity of life as makes every physician a brother to every other physician, kindly in council, cordial in sympathy, helpful in disability, and inspiring to effort. Our last principle is a negative one; when a man marries a wife he becomes a true husband only when he ceases flirting with other women, lounging in the corner grocery, the gilded saloon or club house; so members of medical organizations will cast aside entangling

* Read before the American Academy of Medicine, May 29, 1897.

alliances; hence we may state our last principle thus:

4. Each member of the medical profession should refuse every alliance, personal ambition, or desire, that antagonizes the purpose of the profession; the hearty co-operation of its members, or his own highest personal development therein.

It is the glory of the medical profession that its typical representatives have ever sought to mold their lives in harmony with these principles, and to persuade others to walk in their footsteps. Their personal influence has restrained the mass of the profession from following false guides, and promoted its development along lines best suited to the needs of recurring ages. That these principles never obtained complete dominance merely shows that physicians are human, and advance only as the entire race travels with them.

Accepting them as correct, how do they apply to medical organizations?

In common with other classes, physicians found that they could accomplish more in certain directions by organization than single-handed. At present we find a multitude of such bodies of every conceivable variety: National, State, County, City, Tri-State, Tri-County, Multi-State, Multi-County; societies general and special; general with special branches; and congresses of both the general and special societies. Then we have medical organizations for the relief of the sick (presumably poor), as hospitals and dispensaries, hospitals for the insane, feeble-minded, deaf, blind, and waifs unclassified.

A feature of the conduct of these medical institutions is the fact that though physicians originated them, and are indispensable to their conduct, their actual management is in the hands of laymen or lay women. Attending physicians are appointed or discharged at the whim of these lay managers, irrespective of the good of institutions. Still more significant is the fact that outside physicians rarely resent the indignity or wrong done their professional brothers in such changes. For one place vacated dozens of physicians scramble for the same, reminding one of the fiendish voracity with which a pack of starving wolves devour one of their number who has been stricken with the hunter's bullet.

To train the generation of physicians needed to fill up the ranks depleted by sickness, infirmities, or death, we have medical colleges, located in cities large and small, with a tendency to illimitable fecundity.

To meet the social needs of physicians we have clubs, fraternal institutions after the formula of similar bodies outside the profession.

We have State medical examiners to scrutinize the entrance of new members into the profession; State custodians of the people's interests; their practical value owing to their domination by the lower forms of politics is a matter of serious question. We have boards of health, State, city, town, closely associated with the police in the performance of their duties; and supposed to instruct people in the ways of avoiding disease.

Thus we see that the organizations of physicians are of a most complex nature; that they confer advantages and require service both delicate and intricate.

Medical colleges are usually started and maintained from funds either contributed by the professors or their personal friends; some are a part of universities established by private endowment, like Harvard or Yale, Columbia, Johns Hopkins, etc.; others are supported by the State (at the instigation of some doctors who desired to become teachers therein) as a part of its educational equipment. Thus the medical profession touches the people, not only by its personal relation with individuals as patients, but by its co-operative labors with all that are striving to better the physical condition of the race.

Clearly there are two generically different kinds of medical organizations, one composed solely of physicians, the other a mixture of physicians and laymen.

The first is the natural training school for the second, as it is faithful to the true principles of the profession; so will the second exhibit a higher tone and accomplish better results. Let us now seek to outline a medical society, composed exclusively of physicians, constructed in accordance with the principles already stated.

For convenience, we will take a town of 10,000, with an outlying country of 10,000 more. The medical society of this town will include all physicians who have been so educated as to be able to compre-

hend the study of medicine and have qualified themselves for actual practice by scientific study in laboratories, anatomic, physiologic, chemic, bacteriologic, pharmaceutic, at the bedside of the injured and sick, both in hospital and private practice, and have brought to actual service a legal right to practice medicine, and a right character.

Our society will admit to membership only such as are thus equipped, and as are disposed to co-operate with each other member in professional activity, and are ready to cast off all alliances or personal ambitions or desires that antagonize the one object of the profession.

We have now a society composed of men trained along similar lines working for one end, animated by one purpose, men who are in turn teachers and scholars of each other. Its meetings will be as frequent as is compatible with the obligations of members to their individual work, to society, as citizens, husbands, fathers, brothers. To its meetings each member will bring his best thoughts, his last observations, experiments, operations, modes of practice, etc.; there will be no pauses in the flow of work; the most timid as well as the most self-reliant will feel free to speak, for are not all really brothers, bound by the most sacred obligations to render mutual service, as sympathetic, helpful listeners, as well as frank, honest speakers? Failures as well as successes form a part of the reports and discussions; each will speak just as he thinks, because his thoughts are intelligent, and prompted by a desire to help his fellows and better the people whom they serve, and advance the profession of which he is a member.

The officials of our society will so plan its regular work that no time will be lost and no opportunity wasted; these officials will be selected, not because they sought the office, but because the best interests of the society would be thus aided.

It is needless to suggest that harsh words of members present or absent are never heard; there will be no thoughtless speaking, but all matter presented will have been so prepared as to teach its lesson in the simplest and most direct method.

Finally, the society will recognize its obligations to other societies, by affiliating with them in a rational manner. It will meet its duties to the great profession by publishing such part of its work as will promote scientific inquiry, better lines of practice or improved methods of preventing disease. In short, this society will be a perpetual delight, a source of mutual helpfulness, in developing its members to the highest type of professional excellence; to other societies an example and cordial co-worker, and to the community a fountain of life for the relief of suffering, for the prevention of disease and for the encouragement of all that aids in making the community sound in body, strong and alert in mind, and clean of life.

Of necessity one physician will excel in one direction and another in another, throughout the entire membership, so that from the co-operation described, the deficiencies of one will be met by the excellencies of the other, and so the largest amount and best quality of work secured from all.

Our society will be the natural guide both of individual and public life, in all matters pertaining to the integrity and effectiveness of the human body and mind. Its members will instruct the teachers in the regulation of the studies and duties of school children. To them will be referred problems connected with water supply, drainage, heating, lighting, plumbing, ventilation of private residences, school houses, public halls, and for the solution of these they will be paid.

There will be no malpractice suits, because each has done his work in the best manner possible under the circumstances, and because there will be no sneak of a doctor to start the impulse towards such a suit. Sharp criticism by a doctor respecting the work or character of another will not be heard on the street or even amid the family gossip; our physicians will be recognized as the best friends of every individual, and the close ally of every enterprise or movement looking to the benefit of the communitv.

As compared with our ordinary medical society, the one founded and conducted in accord with the principles stated will differ in the following particulars:

1. While the present society is generally conducted by a few for their personal advantage, the new society will be conduct-

ed by all for the mutual benefit of each and the profession in general.

2. While the present society contains a few of the physicians in a community, the new one will contain all, as those not suited to its nature and work will emigrate, and all others will desire to join and be received with open arms.

3. While the present society is occupied by papers and discussions from a select few, in the new society all will be able to contribute something to the profit of each meeting.

4. While scrambles for office form a disagreeable feature of the present society, the new one will select those who can best serve the many—the office will hunt for the man rather than the man the office.

5. While the present society is padded by papers and discussions scantily concealing the advertisement of the individual at the expense of the many, the new one will have a rich supply of material for the common interest and advantage. Each member will know that what of good he may do or what of value he may write or speak, will find its way to such channels as will return him a fair reward for his work; more than this he will not desire.

6. While in the present society members are sometimes called upon to defend themselves from unjust criticisms, unfair comparisons, the shafts of the learned, the daubing of the ignorant, in the new society all energy will be expended in its legitimate work, thus insuring larger results and a higher stand among scientific bodies.

7. While the present society encourages the development of much that is useless or positively bad in some of its members, the new society furnishes no market for such activities.

8. While the present society often descends to newspaper advertising for the benefit of its controlling gang, the new society will give the profession that which is its due, and to the community equal justice, but none will use the society for personal ends that vitiate the dignity of the entire body, or invade the rights of others.

9. While the present society always has *some* members who unselfishly seek its best interest, the new society will have *all* its membership engaged in this service.

If we apply our principles of organization to medical colleges, the contrast is quite as striking.

Medical history says that, as a whole, medical colleges were established to secure for their promoters a quality and quantity of advertising, forbidden by the code of ethics to all outside such institutions. No doubt many teachers in said colleges perform their duties without reference to such advertising, but as a whole the proposition stands without challenge. The real interests of students, the profession, and the people, are incidental; the real object is the advantage of the individuals in control, at the expense of others.

But in the college organized and conducted in accord with the principles under consideration radical changes appear:

1. No medical college would be organized until the material equipment was adequate for the purpose of training cultured students to an intelligent grasp of modern medicine; such equipment for a modern medical college is large and costly—laboratories, hospitals, dispensaries, as well as apparatus in each department, must be furnished.

2. Our college would have teachers, engaging in the work because of their love for it *per se*, and because by natural endowment and training they were especially fitted for this purpose, rather than a miscellaneous collection from the street of all who would contribute two or more thousand dollars towards the college plant in the same manner that one would engage in a business enterprise.

3. All colleges would pay their teachers according to their labor and qualifications, and charge the students sufficient fees for that purpose, so that it would be quite unnecessary to use the college as an advertising medium at the expense of other practitioners, after the manner of sleeping car conductors, hotel waiters, etc.

4. Such students only would be received within its halls as had by previous study so trained their minds to think and observe, so as to be able to grasp the problems of medicine in their full extent.

5. Only such would receive the degree of M. D. as had demonstrated their fitness for the practice of medicine by actual achievement, and had shown their grasp of those principles of medical association needful for the harmonious co-operation of the entire profession.

6. New medical colleges would only be started when the old ones failed to educate sufficient students for the needs of the people. When started, the honest, faithful work of the professors would secure the approval of laymen, medical societies, and the profession at large.

7. These medical colleges would take care that no more medical men were thrown into the profession than could have a fair show for success, as the reward of an industrious and honorable career.

8. Our medical colleges would not encourage the establishment of hospitals and dispensaries for selfish ends, but would limit them to the actual needs of the community, including the proper training of suitable persons for the medical profession. They would not conduct dispensaries, ostensibly for the needs of the poor, but really that they might attract those able to pay and steer them to their private offices.

9. The new medical college would have a faculty in hearty sympathy with every movement towards increasing the efficiency of the medical profession in its service of the people.

If these be the true principles of medical organization, why do they not more generally dominate the profession? The answer is that the profession was not taught these by either the lectures or lives of their professors; and if perchance, after countless blunders, they were stumbled upon, their past record made reform by unaided effort well-nigh impossible. Reform of such calls for aid from without. If one with adequate intelligence, tact and persuasive power should visit a community in which a dozen or more doctors were striving to lift themselves up by pulling each other down, and first interview each privately, then gather all together for a friendly discussion of the advantages to each from casting aside their porcupine quills and donning the attire of scientific gentlemen, breathing that spirit of kindly courtesy and helpfulness, which makes brothers of strangers, rivals, and even enemies—then might the value of the true principles of medical organization become evident to all.

Such a missionary might be sent by a State medical society to its lifeless local societies and to communities having no local societies, teaching them in a practical manner how to live in accord with the true principles of medical organization.

The State societies should take the local ones under their care, ascertain their defects and seek to remove them, know their strength and encourage their fullest activity, and treat their members with the same consideration as their own.

It would be well if each State society conducted a medical journal for the especial use of its members and the local societies, to bring and keep in touch each with the other, thus gathering all good work and praiseworthy effort and making them the property of each individual.

The American Medical Association ought to have representatives visit each State society, and so instruct as to secure their hearty co-operation in matters helpful to each or all, to remove misunderstandings, promote the knowledge of each other's excellencies, and teach the best methods of conducting society business as to avoid needless friction. These representatives might with advantage consult with the management of the medical colleges, to the end that their services be more helpful to the profession.

They might study hospitals and dispensaries, and bring such influences to bear upon them as to increase their usefulness, and decrease their injuries to profession and people.

We have lived in the delusive belief that medical societies, colleges, hospitals and dispensaries could form and conduct themselves. That they have done this is a fact, but it is also a fact that they have done so in a manner seriously imperiling the best interests of both profession, institution and people.

The removal of existing evils and the prevention of their recurrence calls for the co-operative effort of each. In what manner can such effort be secured more readily than the one suggested? Let the American Medical Association, State societies and local societies place one or more persons in their respective fields to teach the true principles of medical organizations in a practical way, and these evils would quickly diminish.

Effective medical organization needs constant and persistent effort, just as much as any other organization—as churches, fraternities, clubs, etc. The work we have indicated has never been

done in behalf of medical organizations.

The American Medical Association is based upon a delegate representation from the several state and local societies, who technically accept its code of ethics, but it has never sent a representative to any of its constituents, to reason with them for their waywardness, or command their virtues; it even disfranchises its most experienced members, unless they yearly bring a fresh delegate's certificate from a local society. Hence it is little wonder that defection after defection has occurred in many quarters, that misunderstandings have arisen, alienating many of its brightest members.

The same things prevail in most state societies; few interest themselves in their local societies, none ever send messengers thereto for instruction, encouragement, or reproof; none send a representative to a community where doctors are by the ears, to so counsel as to induce them to dwell together in peace and mutual helpfulness, and so earn for the profession the honor and respect of the community. Nor has any society gone into the highways and byways to bring within its folds the timid, the wayward or careless brother.

It will be noted that we have avoided any reference to physical, legal, or legislative force, but have relied entirely upon the power of the true principles of medical organization to prevail, by bringing them home to the individual doctor's life.

It is an evident proposition that the best medical organizations will be unknown, till both national, state, and local societies actively engage in this missionary work, of unifying the medical profession under those eternal principles which form its corner stones.

CONCLUSIONS.

1. The true principles of medical organization can only be comprehended or lived by those having a thorough general and professional training.

2. The first principle compels each to seek the good of the entire organization equally with his own.

3. The second principle directs the life of each member towards a single purpose —the relief and prevention of human suffering.

4. The third principle insures the cordial co-operation of individual members in all things relating to their one purpose, forming a brotherhood stronger than the ties of blood.

5. The final principle frees each member of the organization from all alliances, personal ambitions or desires that antagonize either the purpose of the profession, the hearty co-operation of its members, or his own highest development therein.

6. In all ages these principles have been successfully lived by both lowly and exalted; that they were not adopted by all is due to the fact that the majority of physicians are not greatly in advance of the times in which they lived, and the communities whom they served.

7. The applications of these principles to societies of all kinds, including hospitals, dispensaries, boards of health, and medical colleges, would extinguish many of the evils under which the profession and the laity are now groaning.

8. To hasten this end, it is suggested that medical societies, State, national and local, send suitable representatives to their constituents, teaching the true principles of associated medical effort and persuading them to actively engage in the same.

9. This way is slow, but it is sure, because it would work from the unit to the compound—from the individual to the medical society.

10. Ethical codes, legislative restrictions, professional ostracism, have individually and collectively failed of the desired results; it now remains for the strong to help the weak, the wise the foolish, the learned the ignorant, the prosperous the unfortunate, and see if the true principles of medical organization have not power to breathe a new life into the dry bones of the medical profession, a life that will enable it to work as an individual, a life with a single purpose, a life with a brotherly heart, separate from all distracting ambition, a life so wholesome as to afford no food for deadly microbes, or disfiguring parasites, a life distinguished for its manly strength and regal beauty, and consecrated to the service of suffering humanity.

CURRENT LITERATURE CONDENSED.

The Role of Dyspepsia in Chlorosis.[1]

Observations were made upon 29 cases of chlorosis with the following result: Dilatation of the stomach without retention, 8; dilatation with retention, 6; flatulent dyspepsia, 14; no note, 1. As a rule patients with chlorosis are more troubled with their pale color, breathlessness, swelling of the feet, and palpitation of the heart, than with the gastric disturbances from which they suffer. In 17 of these cases, however, it was found that dyspepsia preceded the chlorosis, in two cases it occurred simultaneously, while in the balance the relation could not be determined. Bouchard, Duclos, and Clark believe that chlorosis is due to an auto-intoxication from the products of fermentation.

In the course of his researches the author found the following conditions coexistent with chlorosis: Hypertrophy of the liver and spleen, 11; hypertrophy of the liver alone, 4; hypertrophy of the spleen alone, 4; negative, 6; not observed, 4. In all cases the hypertrophy disappeared with the cure of the chlorosis. Clement has also almost always found the spleen enlarged in chlorosis. The following results were observed, bearing on the modified functions of the liver: Alimentary glycosuria and urobilin inb urine, 9; urobilin in urine by itself, 1; negative, 4; not observed, 15.

Chatin has also found urohematine, which some think due to increased destruction of the red blood corpuscles, and others to imperfect destruction of the hemoglobin. Satol and indican have also been found in the urine.

The following arguments favor the toxic or infectious theory of chlorosis: Presence of fever; albuminuria in two-thirds of the cases where it is looked for, and the frequency of slight signs of Bright's disease; the characters of the blood whose chief modifications are those of toxic or infectious diseases; the frequency of hemorrhages; phlegmasia alba dolens; inflammations of the pericardium and pleura; the well-confirmed existence of an epidemic chlorosis.

The frequency of relapses does not appear to be incompatible with the hypothesis of a specific infection or, as Arloing seems to admit, that chlorosis may be the consequence of a series of attenuated infections. From the substances found in the urine we may conclude that chlorosis is due either to an infection or to an intoxication.

The dyspeptic troubles perhaps interfere with the regular elaboration of the albumine-ferrous compounds and certainly cause auto-intoxication.

The intoxication reacts on the liver and spleen, the two organs chiefly concerned in the destruction of the red blood corpuscles or increases the activity of the destruction, and makes the necessary transformation of the red blood corpuscles into albuminate of iron (to be used in the formation of new corpuscles) incomplete. Why do all dyspeptics not become chlorotic? Here, account has to be taken of the toil as prepared by over-work, the condition of the arteries, etc. Age, by an unknown mechanism, perhaps a special vulnerability of the blood and hematopoietic organs, has a particularly predisposing effect.

Finally, the success of treatment directed entirely to dyspeptic troubles after the failure of treatment by iron must be taken into consideration. Antidyspeptic treatment must be persevered with for some time after apparent cure to prevent a relapse.

[1] CH. MONGOUR, *Archives Clin. de Bordeauz, Medical Chronicle.*

Abdominal Section from the Standpoint of Peritoneal Drainage.[2]

In the drainage of cases not primarily infected, drainage was employed to control oozing from separated adhesions and

[2] CLARK, *American Journal of Obstetrics.*

to remove collecting fluids. After extensive injury of the peritoneum and other structures, blood and serum may accumulate in dependent pockets. Its subsequent disposal depends upon whether it becomes infected or not. Of 100 undrained cases reviewed, in which there were extensive adhesions, one case only was complicated by pelvic abscess. In 100 similar cases which were drained, eight cases of abscess occurred. The introduction of a gauze drain invariably induces free serous secretion, though it may control the oozing of blood. This in a glass tube or gauze, necessarily communicates with the surface, forms a very suitable medium for cultivation of germs, and may readily become infected. This danger is much greater after the first removal of the drain than immediately after the operation. Infection is often produced by the organisms, which have gained entrance into the upper part of the drain, being squeezed downwards as the gauze is withdrawn through the narrow abdominal opening. This infection some days after operation occurred in several cases. After removal of the gauze the space left tends again to fill with serous or bloody fluid. The opening may now close, and if infection has occurred a purulent collection will form. In two of the cases this ruptured into the general peritoneum, and caused death. If these collections of fluid show signs of infection, the best plan is to drain through the vagina.

Bacteriologic observations were made of the ovaries, tubes, and uteri removed for inflammatory conditions. Of 44 specimens of ovaries and tubes, gonococci were found in 6 cases only, but did not grow on culture. Staphylococcus pyogenes and streptococcus were found in only one case. In 56 uteri examined no orgnaisms were found on culture. Hence it is obvious that accumulations of pus in the pelvis very rarely contain infectious organisms at the time of operation. These results coincide with those of other workers. Two series of 100 cases operated upon for inflammatory affections were again examined. In one drainage was used; in the other it was not. The results show that even allowing for the greater severity of the drained cases, the results if no drainage was adopted were far better. Complications, including fatal cases, arose in 54 per cent. of the drained cases, but only in 20 per cent. of those in which no drainage was used. The author attributes the higher morbidity in the former cases largely to infection through the medium of the drain.

It is also probable that many instances of tympanites and vomiting following operation are due to a constrained position of the bowel around the drain. In 4 cases of 1,700, fecal discharge was noted from the track of the drain. In only one case, however, did a permanent fecal fistula result. In the remainder the discharge ceased spontaneously before the patients left the hospital. In some cases, also, vesical irritation, with dysuria, arose after drainage, the result of adhesions and perivesical inflammation. In most cases these ceased in a short time.

It was not found possible to estimate the frequency of hernia following drainage in a large series of the cases. It is, however, certain that in eight per cent. of cases in which an extensive drain was used hernia has followed.

In considering the prevention and removal of infection without the employment of drainage, the following recommendations were made :

(*a*) Thorough disinfection of the hands: This, it is pointed out, is a matter of great difficulty, and Zweifel's rule is commended, viz, that three days should supervene after contact with infectious matter before abdominal operations can be safely undertaken.

(*b*) Control of hemorrhage: By ligature and twisting the ends of all the vessels, avoiding the inclusion of superfluous tissue. If oozing persists it is safer to rely on peritoneal absorption rather than to drain.

(*c*) Avoidance of bruising, and the preservation of the peritoneum, as far as possible.

(*d*) Isolation of the general peritoneal cavity during operation: For this purpose gauze pads should be freely used.

(*e*) Conservation of the bodily heat.

(*f*) Avoidance of rupture of intra-peritoneal abscesses: If this occurs the pus must be at once removed and the cavity irrigated freely.

(*g*) Irrigation of the peritoneal cavity: This should be carried out with normal saline solution, after every operation in

which debris or fluid escapes into the peritoneum.

(*h*) Promotion of absorption by saline infusions into the peritoneum, followed by postural drainage: If the operation is prolonged introduce a pint or more of saline fluid, and when the patient is settled raise the foot of the bed eighteen inches for twenty-four hours after operation.

(*k*) Submammary saline infusions.

The last three recommendations are open to discussion. As regards the others, every one is agreed. For three years the custom of irrigation has been extensively carried out in the Johns Hopkins Hospital, frequently a pint or more of the solution being allowed to remain in the abdomen.

The object of the Postural Method of Drainage is to prevent the collection of fluid in the pelvis as fas as possible, since this becomes such an excellent medium for the growth of organisms. By this method (1) the general peritoneal cavity is given the opportunity of absorbing fluids as rapidly as possible; (2) infectious organisms are dispersed over the peritoneum, and are destroyed before they can much increase in number; (3) toxic substances are also diluted, and cannot expend their irritation solely over a wounded area.

This method should not be adopted in cases of purulent peritonitic or general peritonitis complicating inflammatory conditions such as appendicitis. The author strongly recommends submammary saline infusion as a therapeutic agent in septicemia, and quotes several striking cases in support of this view.

Drainage may be indicated in (1) appendicitis; (2) local collections of pus in the pelvis, cases more especially suitable for vaginal incision; (3) suture of the intestines if there is any doubt of the integrity of the sutures; (4) excision of fistulous tract; (5) purulent peritonitis.

Strips of gauze are advised both for abdominal and vaginal drainage. The drain should be lightly withdrawn a short distance each day, and gradually shortened. It may generally be left out altogether after the fifth day. From bacteriologic observations it would appear that the chances of infection are about equal in abdominal and vaginal drainage.

Disputed Points Concerning the Levator Ani Muscle.[3]

More than usual attention has been given to the levator ani muscle in the female, not only by anatomists but also by genecologists and obstetricians, because of its practical importance. The author states that his dissections support those of Savage, and objects to the view that the levator ani is the principal support for the pelvic contents of the woman for the following reasons:

(1) In the human subject it belongs to the class of rudimentary muscles.

(2) The weakness of its origin, as well as the direction and the insertion of its fibres is inconsistent with such design.

(3) It is unphysiologic for a muscle to furnish a continuous support.

(4) The recto-vesical fascia is in itself sufficient, when intact, to afford the required support.

(5) The muscle is no better developed in the female (in whom support is most required) than in the male.

A Graphic Study of Tremor.[4]

Questions to be determined: (1) Does a demonstrable tremor exist in healthy individuals? (2) Is there any relation or gradation among various kinds of tremor? (3) Do various forms of disease present, as to their tremor, distinguishing characteristics?

Upwards of 1,100 observations were made on 100 different healthy and diseased persons. It was definitely determined, that tremor could be demonstrated in healthy persons. It was hoped by the author, that his observations would aid in the differentiation between the tremor of multiple sclerosis and that of paralysis agitans, but results were negative.

Graphic demonstration was made of a clinical observation made by Dr. S. Weir Mitchell—that, in cases of paralysis agitans, forcible extension of a finger of the shaking hand may temporarily restrain the movement of the hand.

Tables showing frequency of the movements in tremor, demonstrate the wide variations of movement under all conditions, and strengthen the opinion already expressed that special forms of tremor are

[3] W. W. Browning, M.D., in the *Medical News*.
[4] A. A. Eshner, M.D., the *Journal of Experimental Medicine*.

not characterised by special frequency of movement.

The following are the conclusions:

(1) All muscular movements are made up of a series of elementary contractions and relaxations in alteration which may be appreciable as tremor in conditions of both health and disease.

(2) The differences between different tremors are of degree rather than of kind —*i. e.*, no one form of tremor is distinctive of any one disease or group of disease.

(3) No definite relation exists between one form of tremor and any other.

(4) The frequency of movement is in inverse ratio to the amplitude and *vice versa.*

(5) Habitual movements are performed with greater freedom from tremor than unusual movements.

(6) There is no material difference between the movements of the two sides of the body, except as related to proposition (5).

A Clinical Report on the Chemical Examination of 200 Cases of Human Milk.[5]

To secure a good milk, the mother should have—(1) a good constitution, (2) healthy environment, (3) simple, nutritious diet, with enough albuminous food, (4) regular exercise in the open air. Under the head of environment comes a happy home life, with a minimum of worry. Nervousness of any kind causes a rise of the proteids, and if the woman is constitutionally nervous, this may cause a constant rise, so as to make the milk unfit for a food.

A nutritious diet is necessary; the milk of an underfed woman shows a lack of the total solids. A lack of meat reduces the fats and total solids, and, on the other hand, an excessive meat diet raises the fats too high. A lack of exercise allows the proteids to increase; on the other hand, excessive exercise worries and tires out the mother, and, acting on the nervous system, causes the same result as if exercise had been neglected.

An abnormal quantity of fat in the milk may tax the digestive organs too severely, and is often followed by eructations after nursing, persistent vomiting, intestinal disturbances. The best plan is to cut down the amount of the nitrogenous foods in the mother's diet until the per centage of fat in the milk agrees with the child. A deficiency of fat does not produce any intestinal symptoms, though it is generally considered that a deficiency in fat causes constipation, but this they have not proved. Constipation is more often due to an insufficiency of milk, or a milk poor in solids generally.

The following instances of the value of making a milk analysis is given:—A fine infant doing well and gaining weight: milk analysis—fat 1.85, sugar 6.9, proteids 1.34, salts .25, total 10.36. At three months old the infant began to vomit, have green stools, and much colic, but continued to gain weight till the fifth month, when his weight began to fall off. Analysis at fifth month: fat 8.44, sugar 6.15, proteids .91, salts .17, total solids 15.69. As the fat was excessive in amount, the mother was directed to take a walk in the fresh air every day, and to stop all meat and eggs. Two days later the baby showed a marked improvement, and four days later the fat had fallen to 3.40 per cent, there was no more vomiting, and the stools became normal.

The proteids in milk are apt to be excessive from lack of exercise, too rich a diet, and nervousness. Excessive proteids also occur during the colostrum period. When proteids are in excess the symptoms are apt to be diarrhea, stools often green in colour with undigested curds, colic, and more or less vomiting. There may be loss of weight from week to week if these symptoms persist. This condition is most commonly caused by lack of exercise, especially if the mother is living too well. She should be advised to take walking, or carriage exercise if not strong to do much walking, and by drinking a larger amount of water to dilute her milk, and so lessen the percentage of proteids.

In normal cases the proteids are highest during the colostrum period. The green or greenish-yellow colour of the stools seen in infants after the meconium has been all passed is due in many cases to the excessive proteids in the milk. The infant may suffer from vomiting, diarrhea, and fever, which may pass on to enteritis.

[5] V. and S. ADRIANCE, in *Pediatrics.*

The milk secreted in cases of prematurity retains its colostric condition for a longer period than in full time cases and this may be a source of difficulty. In all cases where the milk does not appear to agree with the infant during the colostrum period, it is wise to draw the milk from the breast with a pump, dilute it with water and feed the infant with the diluted milk. It may be enough in some cases for the mother to drink large quantities of water, so as to dilute the breast milk. As the colostric condition of the milk is only temporary, it is not wise to wean the infant, as it will right itself in a few days or a week.

The most marked changes in the milk in the later months of lactation are a diminution of the proteids and total solids. This condition causes in the infant a general weakness of the constitution, resulting in anemia, fretfulness, a falling below the normal gain in weight, delayed dentition, and proneness to gastro-enteritis. Under these circumstances, if the mother is anemic, iron is indicated, and maltine seems to be beneficial in increasing the total solids in human milk. Cow's milk, in liberal amounts, should be given to the mother. Massage of the breasts have apeared to be useful in some cases. Sooner or later it will be necessary to resort to artificial feeding, in part at least.

SUMMARY.

(1) Excessive fats or proteids may cause gastro-intestinal symptoms in the nursing infant.

(2) Excessive fats may be reduced by diminishing the nitrogenous elements in the mother's diet.

(3) Excessive proteids may be reduced by the proper amount of exercise.

(4) Excessive proteids are especially apt to cause gastro-intestinal symptoms during the colostrum period.

(5) The proteids being higher during the colostrum period of premature confinement, presents dangers to the untimely born infant.

(6) Deterioration in human milk is marked by a reduction in the proteids and total solids, or in the proteids alone.

(7) The deterioration takes places normally during the latter months of lactation, and unless proper additions are made to the infant's diet, is accompanied by a loss of weight or a gain below the normal standard.

(8) When the deterioration occurs earlier, it may be the forerunner of the cessation of lactation, and well directed treatment may improve the condition of the milk.

Death due to the introduction of arsenious acid into the vagina is of exceptional occurrence; the cases that have hitherto been recorded have been cases of homicide. An instance recorded by Harberda may be regarded as unique, inasmuch as it was one of suicide, the deceased herself having introduced the poison. A girl, twenty-four years of age, was admitted into hospital with a distended painful abdomen. She had pain in the throat, dry tongue, contracted pupils, and sub-normal temperature; she gradually became feebler, and died in a state of collapse on the second day after admission. Post-mortem examination revealed isolated hemorrhages and fatty degeneration of the heart and liver to such an extent as to give rise to suspicion of phosphorous poisoning; the kidneys were also fatty, and the spleen was enlarged and gorged with blood. The mucous membrane of the stomach was pale yellowish-white in colour, with very small ecchymoses on the top of the folds, especially about the fundus, but there was no loss of substance; the external genitals were swollen; the upper part of the vagina was filled with a pale yellowish fibrinous exudation; the vagina itself was swollen. In the vagina a small twisted-up piece of paper, containing about six grains of white arsenic was found. The recto-vaginal septum was very hyperemic, infiltrated, and ecchymosed; the anterior part of the rectum which lay contiguous was also hyperemic and swollen, the red of the blood being pale; the uterus only showed a little blood on the surface of its mucous lining. Chemical analysis demonstrated the presence of arsenic in the various tissues.—*Weiner klin. Wochenschrift.*

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PHILADELPHIA, SATURDAY, JULY 24, 1897.

EDITORIAL.

THE PASSING OF SECTARIANISM.

Not only because it is incompatible with the genius of true science, but from the standpoint of ethics, there is no other condition to be so much regretted for its bearing on the American medical profession as the existence of sectarianism in its ranks. Practically, in this country, there is but one sect which can be said to be missed from the medical profession. There are vitapaths and thaumopaths and electropaths and other by-paths leading nowhere, and there are vegetarians and christian scientists and faith curists and numerous like faddists whose claims to emancipation from the thralldom of finite reason are cheerfully conceded, and there is the protean genus of venders of secret "sure-cure specifics." These are but incidents, or accidents, in the evolution of scientific medicine. They are essentially parasitic growths, composed, almost without exception, of such as are excluded from fellowship with the profession by reason of personal or professional disqualifications. So-called eclectics have, in many instances, maintained a standing that commands a certain degree of respect. The applicability, however, of the term "eclectic" to a body of men who have segregated themselves from the most eclectic practice possible may be questioned. Unfortunately, eclecticism in the narrow sense seems to mean the choice of unethical methods; certainly in experience this is found to be generally true.

But there is one sect which has a large share of popular approbation, which has maintained a good standard of medical education, which almost invariably has been in harmony with the profession in social and ethical concerns and, of late years at least, co-operated with it in matters of general professional interest. This sect, yclept homeopath, is missed from the medical profession. The fact that scientific men, virtually united in other respects, can esteem the institutes of medicine so differently that the methods of each must appear radical malpractice to the other, is a paradox. When honest, in-

telligent men working for the same ends differ materially in their views, the schism is to be deplored. The rights of independent opinion must be recognized and respected, but, as it now appears, the separation of homeopaths from the medical profession has no basis in a living issue. Scientific medicine cannot give credence to any dogma, nor may it take cognizance of an hypothetical efficiency in matter so attenuated as to pass even the physical limits of molecular sub-division. Neither may it endorse any rules of thumb in the treatment of disease. To do so would stultify science itself by discarding first principles when applying to therapeutics the general laws deduced from all accumulated knowledge.

No guild, cult or profession should be divided without adequate reason in essential difference of opinion. When such difference of opinion disappears, both honesty and policy call for reunion. There is no question of compromise as between bodies originally independent. Schismatics who cannot conscientiously maintain the peculiar doctrines of a sect should return to the ranks of the profession. Unreasoning adherence to dogma obviously precludes progress. The experience of instrument maker, book dealer and druggist demonstrates that most homeopaths, so-called, consistently endeavor to keep abreast of modern medical science, and in medicine it is physiological and chemical laws, not the theories or convictions of individuals, which govern the operation of remedies.

These remarks are suggested by a recent contribution to the *Medical Visitor*, modestly signed by initials only. The writer, who evidently understands his subject, speaks candidly of the disadvantages of separate organization, and deprecates the continuance of a sectarian name. To be sure, he claims the existence of an illiberal spirit on the part of our forefathers. Not unlikely, for intolerance the conservator of ignorance was characteristic of the times. He says:

"I am writing in perfect candor and without a shadow of partisan bias. We may as well face the music and smell the smoke. In the South it is indifference; in the North it is disintegration. Those who do not see the lines breaking, and the homeopathic school being dissolved by internal and external forces, are either too blind to see the facts or too bitterly partisan to admit them. I am not talking about the growth of members nor the expansion of trademarks. Neither do I refer to the science of therapeutics, whose truths are as vital to-day as they ever were. The truth in medicine, as the truth in political economy, will ultimately stand revealed; there need be no shadow of doubt upon that point. But what common ground of belief or of action have the members of the homeopathic school to-day? One man declares the law of similars to be the basis of union; another, high in authority, affirms that the law has a very limited application. Both homeopaths. One physician abandons all laws and codes and flies to the orificial religion (not to be confounded with orificial surgery); another rejects entirely as a fraud what honest men of experience know to be true concerning orificial irritation. Both homeopaths. This physician uses the Bracelin treatment in diphtheria; that one employs antitoxin; the other one gives the Lord knows what; each claims well-nigh universal success. All homeopaths. This sort of harmony applied to a business house or to a line of railway would put either in the hands of a receiver in less than six months. The old school, its fingers well blistered from burning homeopaths at the stake, has stopped its crazy methods of persecution and holds out this invitation: Welcome, man of science; never mind your pathy; believe what you please, practice what you like, but don't leave the medical profession and start a sect in anatomy, or chemistry, or therapeutics; and if you have anything better than we know, do not hide it under a bushel, but lay it before your fellow workers.

"The homeopathic school, without a common belief and a uniform practice, is not going to withstand this platform much longer, and no amount of howling and whistling is going to alter the facts

in the least. It used to be almost an unknown thing for a homeopath to leave his school; I am not writing of persons, but I can easily name twenty of my personal acquaintances who have gone over to the old school, and might easily name a larger number who would feel perfectly at home on the other side of the fence."

ABSTRACTS.

THE TREATMENT OF TYPHOID FEVER.*

From an analysis of about a hundred cases of typhoid fever under my own personal observation with a mortality of nearly ten per cent., and from the statistics of others showing a mortality ranging from seven to fourteen per cent., it would seem that the death rate from this disease depended more largely upon the character of the epidemic than the plan of treatment employed.

During the past fifteen years numerous methods of treatment have been recommended and faithfully followed by careful observers, but after a thorough trial have either been given up or greatly modified to suit the judgment of the attending physicians. Many of these methods of treatment have had for their object the elimination of the typhoid poison, the stimulation of the central nervous system, the reduction of temperature, or intestinal antisepsis. To show how unsatisfactory and varied are the present methods of treatment one need but look at the expressions of opinion of some of the most experienced practitioners given at a meeting of the Academy of Medicine on October 20, 1896:

Dr. W. Gilman Thompson stated that the cold-bath treatment caused enteric fever to run the shorter and milder course and reduced the mortality one-half; but it did not prevent relapses nor the occurrence of ordinary complications, and it did not interfere with other modes of treatment.

Dr. Morris Manges said that experiments had been made with cultures of typhoid bacilli and with serum, but little had yet come from them clinically. As to intestinal antisepsis, Stern and others had shown that they were not effectual even on micro-organisms less resistant than the typhoid bacilli.

Dr. Francis Delafield said that the bath treatment was absolutely impossible for a considerable number of patients; that he had treated thirty cases with the Woodbridge treatment carried out literally at first, and afterward in a modified form. The modified form consisted in continuing only the calomel and carbonate of guaiacol ingredients of the pill. Later, finding that calomel given so frequently was producing sore mouth, he substituted for it minute doses of Epsom salts and continued the guaiacol. He could see no particular change in the patients under the different methods of treatment, and it was not at all probable that drugs would diminish the mortality of the disease.

Dr. A. B. Ball thought that the reason why the doctors at Bellevue had given up the bath treatment some years ago was that they did not employ the rubbing while giving the bath. He believed a high temperature was beneficial in typhoid, tending to kill the bacilli, and that when baths were given it was often best to give them at a temperature of 85° or even 90° F.

Dr. W. P. Northrup said that at the strong recommendation of a doctor he had used in a number of cases Frankel's toxin. These patients, although recovering, suffered such great discomfort that if he were forgiven for thus allowing them to suffer, he never would repeat the offense. He thought in some cases it might be advisable to apply warmth to the extremities during the cold bath.

Dr. Louis Waldstein believed that calomel was the best drug to use in typhoid fever, especially if given early in the disease.

* CONDICT W. CUTLER, M.D., in *New York Medical Journal.*

Dr. A. P. Dudley held that baths had no anatomic or physiologic basis relative to typhoid fever. The scientific treatment was eliminative, and the bathing did not eliminate the poison. It subjected the patient to unnecessary shock and endangered the heart, whose muscular fibre was weakened by the disease. It was well known that death in this disease was usually attributed to heart failure. The treatment which he employed was magnesium citrate to wash out the intestinal tract.

Many who have subjected our typhoid patients to all plans of treatment, systematic plans which have been indorsed by physicians of large experience, and unsystematic plans which were thought suited to some special case, and have watched some patients get well and others die, have undoubtedly decided that conclusions as to the comparative merits of different plans of treatment cannot be drawn from any but the mass of statistics. In general, the simpler the treatment in typhoid fever the better. The less the number of drugs given the better. The less quantity of whatever single drug will answer the purpose that is taken the better. The more closely nature is followed, and the more cautiously rash interference is shunned, the better.

From the hundred cases of my own referred to, seventy were treated heroically with packs, baths, intestinal antisepsis, antipyretics, calomel, Epsom salts, and all recognized forms of treatment except the serum antitoxin, and with the average success, while the remaining thirty consecutive cases were treated much less energetically, and with only one death and one relapse.

Recognizing typhoid fever as a self-limited disease with a natural tendency toward recovery, it occurred to me that better results could be obtained in aiding nature by maintaining the patient's strength during the period of the disease, and insuring perfect mental and physical rest, than by any other means that we could employ. In the future, with Widal's serum test, it may be possible to make a positive diagnosis of typhoid fever during the first week or ten days of the disease, but unfortunately in the past this has been impossible, and therefore equally impossible to determine the value of the many so-called abortive methods of treatment.

All cases coming under my observation with symptoms which pointed toward the disease were at once ordered to bed, placed upon a strictly liquid diet, and given a large dose of calomel, followed in a few hours with Epsom salts. After the bowels were thoroughly moved, one large dose of Warburg's tincture was given every morning on an empty stomach, and followed during the day with about fifteen grains of quinine in solution, given in divided doses. The majority of these patients have within a week entirely recovered, but I have not considered them as abortive cases of typhoid fever, for other cases under the same treatment have shown the characteristic symptoms of the disease, apparently without this treatment having had the slightest effect.

So soon as the diagnosis of typhoid fever was established all medication was stopped, and a peptonized milk diet was ordered in three to five ounce doses every two hours, and continued as the only article of diet until convalescence was assured. When the diagnosis of the disease is made there are before the patient from two to four weeks of continued fever, great mental, nervous, and physical prostration, restlessness, and delirium. These conditions must be met and provided for. Every organ and tissue in the body has its physiologic function deranged and is acting improperly. To overcome these conditions it is necessary to give nourishing but easily digested and assimilated food, proper stimulation to the depressed nervous system, and to sustain the overtaxed organs and tissues with sedatives to insure quiet and rest, so that as little work as possible may be required of them.

To meet the first indication nearly all physicians agree that a milk diet gives the best result. It seems extremely important that the milk be peptonized, for thus being partially digested artificially, it gives the digestive organs less work to do, and digestion, absorption, and assimilation are more perfectly performed. The gaseous distension of the abdomen was in the majority of my cases but slight when this diet was strictly adhered to.

To meet the second requirement, that of proper stimulation, again most physicians agree that whisky gives the best result. The quantity to be given and the frequency depend entirely upon the condition of the patient; but it should be

given at once when the diagnosis is made, and continued until convalescence is thoroughly established. It is usually better to give it in water well diluted and at frequent intervals, rather than in large doses at longer intervals. In all my cases I have given it in this manner, and its results have been satisfactory, both in regard to the continued effect of the stimulant and to its being well retained by the stomach. None of the patients received less than two ounces a day, and many of them from five to eight ounces, while one patient took over a pint of whiskey a day for a brief period.

To meet the third requirement, and thus insure mental and physical rest, and to lessen nervous exhaustion, morphin was used, and to it I consider my good statistics are due. It was used liberally and frequently in all the thirty cases from the time the diagnosis was positively made until the disease had run its course. Some of the patients were given it in small quantities with the whisky—never more than a sixteenth of a grain at one time—others were given it by hypodermatic injection in larger doses less frequently. When it agreed with the stomach and no nausea resulted from its use it was given with the whiskey; but if there was any disturbance of digestion, then hypodermatic injections were resorted to. The amount given during the day was enough to produce a decided physiologic effect of the drug on the nervous system. The smallest amount given in one day was about a fifth of a grain, and the largest amount two grains; but if the indications had demanded it larger doses would have been given. Decided stupor and coma are contra-indications for its use, and it is therefore important that the patients under this treatment be carefully and intelligently watched.

It was perhaps fortunate that nearly all my thirty cases were under the care of trained nurses, so that the symptoms could be carefully noted, and the amount of morphin intelligently given as the indications warranted. Small doses were given at first by the mouth. If nausea, indigestion, or constipation resulted, then it was given by hypodermatic injection. The dose was gradually increased in size until the respirations were slightly reduced in number and the patient remained quiet and drowsy, with a decided tendency to sleep much of the time. As the fever subsided and convalescence began the amount of morphin was gradually diminished, and stopped entirely when there was no longer any rise of temperature. In none of these cases was the morphin habit established, nor were there in any of the cases bad results or symptoms which could be attributed to the use of the drug. Constipation did not seem to be a contra-indication for its use, nor a slight amount of albumin in the urine. The delirium was always quieted by it, even in cases where it was quite active, and it had a decided stimulating action on the depressed central nervous system, as shown especially in the improved condition of the heart's action and pulse.

The morphin apparently had no special influence on the course of the disease. The milder cases ran a little shorter course than usual, and the serious cases a little longer. The temperature ran about its usual course, in one case reaching 107°, and in many of them from 104° to 105°. Diarrhea was certainly checked in most of the cases, while constipation was produced in others. The most sriking effect of the morphin was manifested on the nervous system. There was in the early part of the disease less restlessness and wakefulness, and in the latter stages less delirium and twitching; and throughout the whole disease less headache and general complaints which we so often hear. Dryness of the tongue was present about as usual, certainly not worse, while the skin was more active, perspiration being quite profuse at times, evidently aiding in the elimination of the typhoid poison.

But one patient suffered with a relapse. She was a young woman who went successfully through a serious attack of the disease, and had a normal temperature for a few days. She then had a return of the fever, with very severe diarrhea, and died, apparently with exhaustion, in about two weeks after the relapse. A post-mortem was allowed, and on autopsy very extensive ulcerations were found in nearly the entire length of the large intestine.

Severe hemorrhage occurred in but one case, and slight hemorrhage in but two or three others. Most of these patients received no other medication except the morphin, the complications being treated

usually without drugs, as follows: To relieve the dryness of the skin and to aid elimination and perspiration, the entire body was sponged off with tepid water once or twice a day and rubbed dry with a coarse towel, the friction acting as a strong nerve stimulant. If the stomach became irritable, and if the patient vomited, all nourishment and stimulation were given by the rectum, and the stomach allowed an absolute rest, a few teaspoonfuls of water only being given at a time to relieve thirst, until that organ was quieted. If the bowels became distended with gas, a soft rubber rectal tube passed high into the bowel and left in position would relieve the symptoms. If constipation was present, an enema of soap and water was given, and usually with good results. If a laxative was necessary, dram doses of Epsom salts dissolved in water and *creme de menthe* given every half hour for three doses would produce the desired result.

How to reduce the temperature in typhoid fever has long been a disputed problem to the medical profession. We have all used the numerous antipyretic coal-tar products, and most of us, I think, have discarded them as dangerous and worse than useless. I remember once calling a well-known consultant physician to see a case of typhoid fever with me. I was especially worried about the continued high temperature. It could be reduced for a few hours with some antipyretic, but would soon rise again to an alarming degree. When asked his advice he said: "Leave the temperature alone. More typhoid patients die from antipyretics than from the fever. High temperature is seldom the cause of death." I have learned to quite agree with him, and now unless the temperature is excessive it does not alarm me.

In none of these thirty cases were antipyretics used, and in but one case was it necessary to reduce the temperature by means of cold water. This was in the case of a young woman whose temperature went up to nearly 107°, and she became comatose. In her case the wet pack was used, and in an hour the temperature fell some four or five degrees, and with the fall of the temperature the comatose condition disappeared, and there was general improvement in her condition. It is reasonable to suppose that this patient would have died had her temperature not been reduced in a few hours. Patients with a temperature of from 103° to 104° seldom require a bath, and tubbing for a temperature of 102° or 103° is neither practical nor advantageous in the large majority of cases. In temperatures of 106° or over, a reduction of temperature by the extraction of heat by cold applications is necessary, but only for the same reason that it is necessary in sunstrokes, and not because it is the temperature of typhoid fever and due to a toxic poison generated in the body.

For the large hemorrhage an ice bag was placed over the abdomen in the right iliac region, and an extra hypodermatic of morphin given. The hemorrhage did not recur. If it had, I should probably have resorted to the administration of gallic acid, and perhaps ergot, but I doubt if any internal medication given to check hemorrhage in typhoid fever has ever been of any service. The slight attacks of hemorrhage received no treatment.

The nervous symptoms and diarrhea were so controlled by the morphin that no other medication was required. Should the diarrhea be profuse, exhausting, and not controlled by the morphin, the use of subgallate or salicylate of bismuth and naphthalin would have been followed by good results.

Whether the good results here recorded from the use of morphin in enteric fever will be borne out by its further use, time alone can answer; but from my experience it is the most satisfactory plan of treatment, both to the patient and to the physician, and with the lowest rate of mortality. Complications may arise which would demand the use of other agents, or perhaps necessitate the withholding of the morphin, but such cases would be exceptional ones.

The action of the morphin, although relieving many of the distressing symptoms of the disease, seems to be in some way really antitoxic, and lessens the depression of the central nervous system, which is most frequently either the direct or indirect cause of death. What may be expected from the treatment of typhoid fever in the future with antitoxin serum it is too soon to predict, but investigations are going on in this direction which may lead to good results.

With still brighter prospects for success have pathologists been experimenting with typhoid bacilli in anti-typhoid vaccination. The method employed consists of inoculation of the dead typhoid bacilli. The experiments of Wright and Semple, although not conclusive, seem to warrant the belief that persons thus vaccinated are protected against typhoid fever. It is uncertain how long this protection lasts, but as the vaccination can be practiced without risk to the life or health of the individual, revaccination can be performed whenever there is great danger of typhoid infection.

PHENOMENA OF MESCAL INTOXICATION.*

On Good Friday, being entirely alone in quiet London rooms, I made an infusion of three mescal buttons (a full dose) and took it in three portions at intervals of an hour, between 2.30 and 4.30 P. M.† The first noteworthy result (and the only one of therapeutic interest which I have to record) was that a headache which had been present for some hours and showed a tendency to aggravation, was immediately relieved and speedily dissipated. There was slight drowsiness before the third dose was taken, but this speedily passed off and gave place to a certain consciousness of unusual energy and intellectual power, which also quickly passed off.

So far no visual phenomena had appeared, even when the eyes were closed for several minutes, and there was yet no marked increase of knee-jerk; there was, however, a certain heightening of muscular irritability, such as may be noted when one has been without sleep for an unusual period. The pulse also began to fall. After the third dose I was still feeling on the whole better than before I began the experiment. But at 5 P. M. I felt slightly faint, and it became difficult to concentrate my attention in reading; I lay down and found that the pulse had now fallen to 48, but no visual phenomena had yet appeared. At 6 P. M. I noticed while lying down (in which position I was able to read) that a pale violet shadow floated over the page.

I had already noted that objects which were not in the direct line of vision showed a tendency to be heightened in color and to appear enlarged and obtrusive, while after-images began to be marked and persistent. At 6 P. M. there was a slight feeling of faintness as well as of nausea, and the first symptoms of muscular incoördination began to appear, but there was no marked discomfort. By 7 P. M. vision had begun to appear with closed eyelids, a vague, confused mass of kaleidoscopic character. The visual phenomena seen with open eyes now also became more marked, and in addition to the very distinct violet shadow there were faint green shadows. Perhaps the most pleasant moment in the experience occurred at 7.30 P. M., when for the first time the color visions with closed eyes became vivid and distinct, while at the same time I had an olfactory hallucination, the air seeming filled with vague perfume.

Meanwhile the pulse had been rising, and by 8.30 P. M. had reached its normal level (72 in the sitting posture). At the same time muscular incoördination had so far advanced that it was almost impossible to manipulate a pen, and I had to write with a pencil; this also I could soon only use for a few minutes at a time, and as I wrote a golden tone now lay over the paper, and the pencil seemed to write in gold, while my hand, seen in indirect vision as I wrote, looked bronzed, scaled, and flushed with red.

Except for slight nausea I continued to feel well, and there was no loss of mental coolness or alertness. When gazing at the visions with closed eyes I occasionally experienced right frontal headache, but as I only noticed it at this time I attribute this mainly to the concentration of visual attention.

In one very important particular my experience differs from Dr. Weir Mitchell's. He was unable to see the visions with open eyes, even in the darkest room. I found it perfectly easy to see them with

* Havelock Ellis, in *The Lancet.*

† I first cut up the buttons into small fragments, and I poured on boiling water twice: a single infusion, as I have since found in the case of other persons, is inactive.

open eyes in a dark room, though they were less brilliant than when the eyes were closed. At 10 P. M., finding that movement distinctly aggravated the nausea and faintness, I went to bed, and as I undressed was impressed by the bronzed and pigmented appearance of my limbs. In bed the nausea entirely disappeared, not to reappear, the only discomfort that remained being the sensation of thoracic oppression, and the occasional involuntary sighing, evidently due to shallow respiration, which had appeared about the same time as the vision began. But there was not the slightest drowsiness. This insomnia seemed to be connected less with the constantly shifting visions, which were always beautiful and agreeable, than with the vague alarm caused by thoracic oppression, and more especially with the auditory hyperesthesia.

I was uncomfortably receptive to sounds of every kind, and whenever I seemed to be nearly falling asleep I was invariably startled either by the exaggerated reverberation of some distant street noise (though the neighborhood was even quieter than usual), or, again, by the mental image (not hallucination) of a loud sound, or, again, as I was sometimes inclined to think, by actual faint hallucinatory sounds; this, however, was difficult to verify. At a later stage there was some ringing in the ear. There was slight twitching of the larger muscles of the legs, etc., and before going to bed I had ascertained that the knee-jerk was much exaggerated. The skin was hot and dry. The visions continued.

After some hours, tired of watching them, I lighted the gas. Then I found myself in a position to watch a new series of vivid phenomena to which the previous investigators had not alluded. The gas—i. e., an ordinary flickering burner—seemed to burn with great brilliance, sending out waves of light which extended and contracted rhythmically in an enormously exaggerated manner. What chiefly impressed me, however, were the shadows which came in all directions, heightened by flushes of red, green, and especially violet. The whole room then became vivid and beautiful, and the tone and texture of the whitewashed but not remarkably white ceiling was immensely improved. The difference between the room as I then saw it and its usual appearance was precisely the difference one may often observe between the picture of a room and the actual room. The shadows I saw were the shadows which the artist puts in, but which are not visible under normal conditions of casual inspection. The violet shadows especially reminded me of Monet's paintings, and as I gazed at them it occurred to me that mescal doubtless reproduces the same conditions of visual hyperesthesia, or rather exhaustion, which is certainly produced in the artist by prolonged visual attention (although this point has yet received no attention from psychologists). It seems probable that these predominantly violet shadows are to some extent conditioned by the dilatation of the pupils, which, as the American observers had already noted, always occurs in mescal intoxication.

I may remark in this connection that violet vision has been noted after eye operations; and Dobrowolsky‡ has argued that a necessary condition for such vision is the dilatation of the pupils produced by atropin, so that the color vision (chiefly violet, though to some extent of other colors) is really of the nature of an after-image due to bright light. Dobrowolsky's explanation seems to fit in accurately with my experiences under mescal.

I wished to ascertain how the subdued and steady electric light would influence vision, and passed into the next room. Here the richly colored shadows, evidently due to the stimulus of the flickering light, were not obtrusive; but I was able to observe that whatever I gazed at showed a tendency to wave or pulsate. The curtains waved to a marked extent. On close inspection I detected a slight amount of real movement, which doubtless increased the coarser imaginary movement; this latter showed a tendency to spread to the walls. At the same time the matting on the floor showed a very rich texture, thick and felted, and seemed to rise in little waves. These effects were clearly produced by the play of heightened shadows on the outskirts of the visual field. At 3.30 A. M. I found that the phenomena were distinctly decreasing, and soon fell asleep. Sleep was apparently peaceful and dreamless, and I rose at the usual hour without

‡ Ueber die Ursache der Erythropsie, Archiv fur Ophthalmologie, vol. xxiii, p. 213.

any sense of fatigue, although there was a slight headache. A few of the faint visual phenomena with which the experience had commenced still persisted for a few hours.

Motor incoördination and the thoracic symptoms of cardiac and respiratory depression were in my case the only really unpleasant symptoms of the experiment. They are barely noticed by the American observers, who emphasize the gastric symptoms and headache, in Dr. Weir Mitchell's case persisting for several days. In my case there were practically no unpleasant after results. I cannot say how far the method of administration affected this result. I took the drug in infusion; previous experimenters used an extract or a tincture, or else ate the buttons.

It cannot be said (from my experience) that the pleasure of mescal intoxication lies in any resultant passive emotional state such as is produced by tea or alcohol, but strictly in the enjoyment of the color visions produced. Attention is impaired (and one realizes under the influence of mescal how largely attention is a matter of coördination), but intellectual judgment remains unimpaired. The visions as I recall them, seem to me (unlike most dream visions) as beautiful in memory as when I experienced them. The sensory phenomena seem to be due to great and general disintegration and exhaustion of the sensory apparatus; in a slighter degree the same phenomena are found in neurasthenia, even the color vision. I am convinced that all the senses were more or less affected. There were vague dermal sensations, and the body felt unfamiliar to touch, just as everything seemed delightfully unfamiliar to the sense of vision. I noticed, also, that any marked casual stimulation of the skin produced other sensory phenomena—a heightening of the visions or an impression of sound. This is a phenomenon which may throw an interesting light on the synesthesiæ or "secondary sensations."

The phenomena of mescal intoxication are thus mainly a saturnalia of the specific senses, and chiefly an orgy of vision. Personally, I have found the penalty of a single dose surprisingly light, though, having learned what the experience has to teach, I have no special inclination to renew it. But I fully agree with Dr. Weir Mitchell, that there is every likelihood that mescal will become popular. It certainly has a great future before it with those who cultivate the vision-breeding drugs. At the same time, it is of no little interest to the physiologist and psychologist.

Outside the body it has been found that the calculi composed of oxalate of lime are least permeable to the X-rays; phosphatic calculi are more permeable, then uric acid and lastly, biliary concretions. The shadow produced by a uric acid calculus was less dense than that produced by a piece of rib, and much less dense than that given by a piece of rib covered by a piece of kidney. The diagnosis, therefore, of uric acid stones in the kidney by this method is likely to be very difficult, and calculi in gall-bladder, which give a still lighter shadow, present still greater difficulties. The shadows caused by the calculi on the plate become gradually fainter as the time of exposure is prolonged; the best results are obtained with an exposure of one minute. With sixteen minutes, only the oxalic and phosphatic calculi and the merest trace of rib were seen. The penetrating power of the rays was greater the nearer the source of light was situated to the caculi. It would thus appear that in diagnosing renal calculi by this method a short exposure may give a better result than a long one.

The case in which a stone in the kidney was demonstrated by these rays, was a man, aged 27, in whom the symptoms were somewhat indefinite. "Skiagrams showed a distinct shadow in the region of the left kidney, but the negative was too 'thin' to permit of a print being satisfactorily reproduced." The calculus, when examined, after removal by operation, was found to weigh 148 grains; it consisted of almost pure oxalate of lime. —*Bristol Medico-Chirurgical Journal.*

SOCIETY REPORTS.

DELAWARE STATE MEDICAL SOCIETY.

Annual meeting at Rehoboth, June 8, 1897.

(Continued from the issue of July 17.)

DR. TOMLINSON: We would be pleased to hear from Dr. Hearn on the subject of appendicitis.

DR. W. J. HEARN: The request just made reminds me of a recent experience. I was asked to deliver an address before the Huntingdon County, (Pa.) Medical Society. Shortly before the time of the meeting I happened to meet one of the members of the Society, and incidentally he inquired as to the subject of my paper, stating that he hoped "it was not about appendicitis, as they had heard four or five papers recently upon the subject, and considered that they had had a surfeit." Fortunately my paper was upon another subject, but in consequence of this experience, I am sure you will pardon me if, instead of speaking upon appendicitis, I take for my subject, "Affections in the right iliac fossa."

During the session of the American Medical Association, I had the pleasure of meeting Dr. Fowler of Brooklyn, and having a long talk with him upon this subject, in which he is a recognized authority, and the author of a work of considerable importance, dealing with the diagnosis and treatment of appendiceal disease. Remarks made upon the subject of differential diagnosis of appendicitis will no doubt be interesting to all of you, who are lately beginning to wonder if many of the so-called cases of appendicitis have not after all been biliary colic, intestinal indigestion, etc.

It is important to be able to tell the difference between catarrhal conditions of the cecum and appendicitis. There are many conditions affecting this region of the bowel with which appendicitis may be confused, such as cecitis, abscess of the peri-cecal tissues, typhlitis, para-typhlitis, etc.

If pus exists in the abdomen with loss of peristalsis and with abdominal distension, the patient is bound to die, whether operated upon or not. Where this abdominal distension is absent, the prognosis is generally good. Dr. Fowler mentioned one case in which the appendix was removed, and afterwards had an abscess in the same region, which occasioned all the symptoms quoted generally as unerringly indicative of an attack of appendicitis.

In operating, Dr. Fowler uses very little water in cases which present a limiting membrane, mopping out the seat of inflammation so as not to diffuse the infecting material all through the abdominal cavity.

It is generally conceded by the best authorities that in many cases it is better not to attempt the removal of the appendix. I recall a case in which I operated recently for a friend in which he was very much disappointed and surprised that I did not attempt its removal. In this case it formed part of the limiting abscess wall, and it would have been very unwise to have interfered with it and risk the chance of septic peritonitis. I have seen enough to know that the appendix often takes care of itself.

Dr. Fowler has a new wrinkle in the method of removing the appendix, which is performed as follows:—A double bowknot is tied three-quarters of an inch from the cecum, and the appendix is cut off by cautery. The stump is inverted and a purse string ligature placed about it, thus shutting off all possibility of leakage infecting material into the general abdominal cavity, the peritoneal surfaces being closed within six hours.

DR. JOHN BUTLER, Newark, Del.: To return to the matter of typhoid fever: I would like to ask Dr. Tomlinson how Dr. McCormick prevents inflammation and ulceration of Peyer's patches in typhoid fever. This information would be of more use to me than a dissertation on calomel or any other drug. I never use calomel except in malarial cases, and make generous use of turpentine and mineral acids.

DR. PIERCE: The matter of the use of calomel in typhoid receives little attention abroad. The more modern foreign authorities dwell more particularly upon treatment with lead acetate, strict hygiene, careful dieting, bathing, etc. The tendency of the times in the disease seems to be toward less and less medication.

DR. TOMLINSON: I was impressed with the changes in treatment advocated by leading essayists at the recent convention although there were not so many statistics quoted as usual. There seems to be but little doubt that calomel is beneficial in the earlier stages of the disease.

DR. OWENS: What means were recommended in malarial typhoid where the bowels are in an almost constant activity which it seems almost impossible to stop?

DR. TOMLINSON: It was claimed that calomel would control this symptom, although I do not recollect any particular dose having been mentioned.

DR. OWENS: I have found minute doses most efficacious in controlling this symptom. I have had a few cases however where it was impossible to control the discharges, even with the use of opium and lead acetate.

DR. E. FOWLER: I am willing to pit my experience and success in the treatment of typhoid fever against any man in New York or elsewhere. I have always found calomel in minute doses beneficial, and lay its action to the fact that it becomes changed to mercuric bichlorid in the bowel, and thus acts as an antiseptic. I watch the tongue and the dejections for indications for the use of the drug for purposes of antisepsis. I often find it necessary to begin treatment with an emetic, such as ipecac, to clear the stomach of possible lurking germs. I generally keep up the patient's strength by the use of peptonized foods.

An invitation was read from Dr. C. P. Wertenbaker of the quarantine station at the Delaware Breakwater, inviting the Society to visit the station and inspect the facilities for the treatment and isolation of infectious diseases. On motion of Dr. Mustard a vote of thanks was extended for the courtesy.

The board of censors reported upon the case of Dr. S. A. Fritts of St. Georges, referred to them for action by the Society, finding him guilty of unprofessional conduct, and recommending the adoption of the following resolution:

WHEREAS: It has been reported by the committee of censors of New Castle county that the charges made against Dr. S. A. Fritts have been investigated and found to be true, the board of censors does hereby recommend to the President and Fellows of the Delaware State Medical Society that the said Dr. S. A. Fritts be expelled from membership in the Society, he having been and still being guilty of unprofessional conduct and of violation of the code of ethics.

The following bills were approved and ordered paid: P. W. Tomlinson, $7.65; State Publishing Company, $2.00; Star Publishing Company, $48.10; Nautilus Publishing Company, $1.25. The report of the treasurer, showing a balance in hand of $259.26, was approved.

In discussion the fact was brought out that Dr. Fritts had asserted that he was not a member of the Society, and that therefore the body had no right to censure him, but the record of payment by him of $10 to the board of examiners appointed by the Society, and also of the usual initiation fee of $1 was attested to by the treasurer, proving his membership and the jurisdiction of the Society.

James Richardson, C. Carter, Malcolm Council and Dr. Mesropian were proposed for membership. Dr. Bellville stated that these men do not come under our old laws. They were registered before the new law went into effect, and they now make application for membership in the Society.

DR. VALANDIGHAM: According to the old law, physicians desiring to practice in the State of Delaware had to appear before a Board of Medical Examiners appointed by the State Society. These examiners were really state officers, as the board was created by Legislature enactment. The Board was appointed by and under the supervision of the State Society. Under the new law the applicant has to appear before the State Examining Board, which is composed of men who are appointees of the Governor, but taken from a list supplied by the State Society. Suppose now, applicants for license to practice should fail to pass this State examination, are we to take them into membership of the State Society?

DR. BURTON: This question has never come up before the State Society.

DR. VALANDIGHAM: I do not see how it is possible to consider as eligible to membership in the State Society those who have not passed the State examination.

new law all the authority that the Society has is to recommend men for the State

DR. MARSHALL: It appears that under the board.

DR. VALANDIGHAM: At the recent meeting of the State Licensing and Examining Boards the same trouble which we have at home was reported: That the difficulty in controlling medical practice is not so much a deficiency in medical education as in preliminary qualifications. For two or three years that Association has been working for a uniform system of preliminary education but has not reached any tangible result. The standing of the profession in this State depends upon the ntegrity with which the examiners perform their duty. Ohio reports that the law in force there is unsatisfactory. These laws should be perfected until they are as nearly uniform as can be hoped for. In Delaware the State makes no provision for the expenses of the Board of Examiners. The fee is low, and the Board pays its own expenses.

A member of the Pennsylvania State Board was approached some time ago by some members of our Board regarding the recognition by the Pennsylvania State Board of our certificates. There is no provision in either case for such recognition, and instead of the fee of $10 which we have, their fee is $25. Let us establish a standard equal to any other Board of Examiners, but we should leave it to others to take the initiative in the way of making a change; on account of our small territory as compared with other States we are in a position to get the worst of it. It will be time enough when Pennsylvania makes overtures to us to talk about change. Our Board does not give any option in the matter. The applicant must appear before members of the Board and there is no provision for recognizing any other certificate.

The question was asked of the Pennsylvania Examiner: "In the case of a man of good standing who has practiced a number of years in Delaware and desires to practice in Pennsylvania, is there no method which will enable him to qualify in your State other than to appear before the Board?" The reply was, that in that case one of us

should write to him and he would see what he could do.

We have granted licenses in this State to 31 persons since the first State Examining Board, under the new law, met in July, 1895. Of these eight were homeopaths. There were no rejections on their part. We have rejected 20, or 25 per cent. of our applicants. At the present time there are only three qualified applicants to come before the Board, but there are several others who are not qualified. The rejection of unqualified parties is an unpleasant duty but must be manfully carried out. If in any way we venture to reduce our standard, Delaware will become the dumping ground of all the surrounding States.

Shortly before July, 1895, when the new law was coming into effect, but before it had been passed, thirty applicants rushed down to be qualified. Fifteen of these were from New Castle county. We granted certificates to some of them, but in some cases stood them off. We had a meeting of physicians in Wilmington and I was advised not to qualify any more. I had no option in the matter, however, and in some cases was compelled to grant certificates. There was one registration in Kent County fifteen or twenty hours before the law went into effect. The law has had good effect; instead of twenty-five or thirty applicants per year we have now about ten. I have no desire to criticise the law and any amendment can not be entirely satisfactory to the public.

I recognize that it is a hard thing when a man has spent his last dollar for education and appears for license for practice without possessing proper qualifications, to be refused such license, but no matter how unpleasant we are bound to do our duty by the State, the members of the profession, and the public. A complaint has been recently made on account of the lack of provision in the law to provide certificates from the Examining Board. This matter was recently presented to Judge Lore. He authorized me to have samples prepared and the matter will be attended to.

The matter of the new constitution was then taken up, it and the by-laws being read and acted upon section by section, and finally adopted with but very slight changes Upon motion of Dr. J. A. Ellegood a vote of thanks was tendered to the committee for its efficient work, and it was further moved that the Constitution and by-laws should go into operation at once. Five hundred copies were ordered printed and distributed, and the committee was continued for this purpose.

The following were elected members on payment of $1 dues: James Richardson; M. Mesropian; Malcolm Council; H. C. Carter; W. T. Jones.

Motion was made that in event of any delegate finding it impossible to attend the meeting of the American Medical Association, he should report to the President or Secretary not later than one month before the meeting of the Association and that the President should have authority to appoint an alternate.

According to the newly adopted constitution, nominations for the office of President were declared in order. Dr. P. W. Tomlinson of Wilmington was nominated, and as no other name was offered the election was made unanimous.

Drs. E. W. Cooper, W. Marshall, James A. Wilson, I. S. Valandigham and P. W. Tomlinson having been appointed a committee on nomination, made the following report, all the names presented being afterward confirmed by the vote of the Society.

First Vice-President, Dr. B. L. Lewis;
Second Vice-President, Dr. Robt. Ellegood;
Permanent Secretary, Dr. Frank Bellville;
Treasurer, Dr. W. C. Pierce.

Committee of Councillors—New Castle, one year Frank Springer; two years, Josh. Ellegood; three years, I. S. Valandigham; Kent, one year, J. H. Wilson; two years, G. W. Marshall; three years, E. W. Cooper; Sussex, one year, H. Burton; two years, R. G. Ellegood; three years, W. P. Orr.

Names for members of Examining Board, I. S. Valandigham, P. T. Carlisle, P. W. Tomlinson, D. L. Mustard, Willard Springer, E. W. Cooper, J. T. Massey, L. A. H. Bishop, O. D. Robinson, E. S. Dwight.

Delegates to the American Medical Association: New Castle, W. H. Burr; H. J. Stubbs, Joshua A. Ellegood, W. H. Hanker, H. J. M. Kollock; Kent, J. H. Wilson, J. P. Massey, B. L. Lewis, W. Marshall, J. W. Clifton; Sussex, W. P. Orr, R. G. Ellegood, H. Burton, F. H. Gum, D. D. Palmer

Delegates to Pennsylvania State Society, W. T. Skinner, W. M. Ogle; New Jersey, T. J. Owens, R. R. Tybout; Maryland, Dr. Lawrence, Dr. Cahall, R. B. McKee; New York, G. Frank Jones, J. B. Waples.

Delegates to Pharmaceutical Society of Delaware, Drs. John B. Butler and J. W. Clifton.

The next place of meeting will be Wilmington, June, 1898.

Dr. John Palmer was chosen assistant secretary, and the following Committee of Arrangements was chosen: Drs. Willard Springer, W. G. Winner, Joshua Ellegood, H. R. Spruance, John Palmer.

After some discussion a motion was carried appointing a committee of three, one from each county, to confer with the medical men of the State in regard to making on official contribution to the Rush Monument fund, and to endeavor to secure contributions to the same.

The following papers were read by title: "Multilocular Ovarian Cyst complicating Pregnancy" by Dr. Josephine M. R. White of Wilmington, (see page 000) and "Heredity" by Dr. W. M. Ogle of Delaware City (see page 000.)

The session having been prolonged until 2 a. m., on motion the Society adjourned.

PERISCOPE.

NEWS AND MISCELLANY.

According to *La Medecine Moderne*, Bernardbeig, of Havre, has obtained very good results from enveloping the chest in cold wet cloths in the **treatment of pulmonary affection** associated with high temperature in children. A piece of gauze folded eight or ten times and large enough to reach from the axilla to the umbilicus and to completely surround the thorax, is dipped in water at the temperature of the room, wrung out and applied to the patient's thorax; over it is placed a piece of sheet rubber. The application is renewed every quarter or half hour until there is a diminution of the dyspnea, the temperature and the nervous excitation. Usually these symptoms are markedly ameliorated and no complications occur. Should the temperature remain high, the tepid or cool bath is resorted to. As a rule, after the first application, the child does not object to their further use.

The compresses are indicated in acute hyperemia of the lung with marked congestion and venous stasis, in cases of bronchitis, idiopathic, or associated with the eruptive fevers. They are also thought to be of value in the treatment of chronic tuberculosis.

Bernardbeig cites cases of broncho-pneumonia in young children with high temperature, intense dyspnea, and nervous excitation, in which the symptoms improved with extraordinary rapidity after this treatment was instituted. A great advantage of the method is that the child's stomach is not disordered by the introduction of remedies.

E. Lugaro (*Rivista di patol, nerv. e mentale*) finds that the **spinal ganglia contain nerve cells of various types**—*i. e.*, so far as their minute structure is concerned. He distinguishes five such types. After removal of a part of the skin (dog) supplied by nerves from a special spinal ganglion minute changes were found in the spinal ganglion cells of the corresponding nerves. If, however, the nerve was excised—*e. g.*, sciatic—after 12 days marked changes in the nerve cells were obvious in the corresponding ganglia, more than one-half of the cells showing degenerative changes, which were most marked in the cells belonging to the larger type of cell. After 39 days there were many normal cells, pointing to a restitution of cells, but the ganglion, as a whole, contained fewer cells, and much more connective tissue. Section of the posterior root gave negative results. Obviously these results have an important bearing on the pathogenesis of tabes dorsalis.—*Medical Chronicle.*

The almost universally accepted theory of **the causation of eclampsia** is renal insufficiency. But the other organs of the body, especially the liver, must be investigated. Strumpf found acetone in the urine of all eclamptic patients whose breath smelt of it; and the authors relate the details of a similar case, and claim that the presence of acetone is the index of the true condition present. Acetone results from katabolism of organised tissues, not of ingested proteids. The liver deals more rapidly with the nitrogenous products of metabolism than with the non-nitrogenous moiety; and the authors suggest that in pregnancy the increased work thrown on to the liver may result in hepatic inadequacy, and that there may be a "liver of pregnancy," just as there is a kidney of pregnancy. The products of metabolism in both fetus and mother are carried to the maternal liver, where they normally undergo katabolic changes to urea and bile salts; but in cases of hepatic inadequacy these products accumulate and eclampsia results. The nephritis which coexists with eclampsia is mainly secondary, and is analogous to the nephritis of scarlatina. The relation of acetone to metabolism is so important that the urine of pregnant women should be systematically examined for it.—*American Journal of Obstetrics.*

Dr. Lacone Maestro is said to have applied the **thyroid treatment to tetany** with some success. The thyroid gland was given raw or slightly cooked, and the dose, small to begin with, was carefully increased to 30 grs. a day. Although only three cases were tried, the results seemed definite enough to allow the following conclusions to be made. The thyroid treatment is well borne by children, and the digestive functions and diuresis are not notably influenced by it, and it is only in certain cases that it is necessary to suspend the treatment from time to time. In idiopathic tetany the administration of thyroid gland was found to diminish the intensity and the frequency of the attacks and shorten the duration of the disease; while at the same time this treatment is not opposed to the symptomatic treatment, as it does not present any incompatibility with the methods ordinarily employed.—*Lancet.*

Combemale and Descheemaker *Revue de Therapeutique Medico-Chirurgicale*) have obtained excellent results from the use of **sulphonal in the night sweats of phthisis** From fifteen to thirty grains of the drug are given each night. The cough is also diminished. In the very advanced stage of tuberculosis, however, the influence of the drug over the sweat is not marked.

Dr. J. A. Storck has used **formalin in chronic mucous gastritis and in dilatation of the stomach** with the most gratifying results. In cases of chronic mucous catarrh about five or six hours before the principal meal of the day 1,000 cc. of a quarter per cent. solution of salt at 40 degrees C. are introduced into the stomach through a stomach tube and then withdrawn. The same quantity of plain water at the same temperature is then introduced and also withdrawn; 1,000 cc. of a 1 per thousand solution of formalin is now allowed to flow slowly into the stomach, and withdrawn after two to five minutes. After its withdrawal, the stomach is again irrigated with plain water. In cases of dilatation, where fermentation is marked, Dr. Storck washes out the stomach before breakfast when the organ is empty. Plain water at 40 degrees C. is used first, then 1,000 cc. of a 1 per thousand formalin solution as before, plain water at 40 C. being used finally. The author considers that formalin might also prove useful in ulcer of the stomach, in fermentative intestinal disorders, and in typhoid fever.—*New Orleans Medical and Surgical Journal.*

As a matter of clinical experience, attacks of **acute naso-pharyngitis** are exacerbations of a chronic condition, and are encouraged by the existence of some nasal abnormality, such as septal deflection, hypertrophy of the posterior end of the inferior turbinated body, etc. Dr. C. H. Knight has frequently come across cases of obstinate post-nasal catarrh, dependent upon the presence of a septal exostosis interfering either with breathing or with drainage. Behind such an obstruction there always exists a more or less extensive area of hyperemia due to rarefaction of air during inspiration. Such an obstruction, although it may not seriously interfere with respiratory acts, offers a site for the lodgment and retention of secretion, which, as it decomposes, becomes an additional source of irritation. Such obstructions should always be removed. If the projection of the exostosis from the septum be abrupt there is as a rule little difficulty in removing it with one of Bosworth's nasal saws. The wound thus formed heals kindly if careful local treatment be systematically applied.—*The Laryngoscope.*

D. P. Mayhew (*Journal of Experimental Medicine*), describes a somewhat elaborate apparatus for determining **the Time of Reflex Winking**. Exner (1874) found the time on an average to be 0.578 second, the time being less for a stronger than for a weaker stimulus. Mayhew finds that the mean total time from 450 experiments on 16 subjects equals 0.0420 second; but it varies in different individuals from 0.0351 to 0.0491 second. As in all time experiments, perfection of apparatus for immediate response seems to lessen the values obtained.

In the *Journal de med. et chir.*, December 25, 1896, is recorded the case of a young man who developed **an exceptional intolerance for antipyrin**. He had often taken antipyrin without discomfort until he was 17 years of age, when he suffered from typhoid fever. In the course of the following year he took it several times, once a dose of 15 grains, afterwards half this dose, then only three or four grains, and finally between one and two grains. Even after the smallest dose unpleasant symptoms appeared. At first there was marked twitchings in the genital and anal regions. In a few days there appeared here numerous blebs, which burst and formed scabs. On the gums there appeared also little blisters. The remarkable fact is that intolerance developed after typhoid fever.—*Medical Chronicle.*

Holler records a **few cases of defective vision** arising from various causes and of stationary character who were unable to read. Among these he mentions corneal opacities of the vitreous, or lesions resulting from affections of the choroid, retina, and optic nerve. Of course, the patients that can be benefited are limited. He tests by means of an ordinary spectacle frame, which carries on one side a screen and on the other a plus glass of from 15 to 30 D.; This glass is mounted at the end of a short aluminum tube, two inches long, blackened inside and out. By this means the patient is enabled to read ordinary print by passing it in front of the eye. Of course the field of vision is necessarily limited.—*Annals of Opthalmology and Otology.*

Wigodsky reports **protracted gestation in a multipara** aged twenty-eight. The last period was on September 7, the fetal movements were first felt at the end of January, and labor occurred on August 13. Pregnancy otherwise natural. Forceps delivery, delayed by great breadth of shoulders. The fetus was a living anencephalus.—*British Medical Journal.*

Very stout women have suddenly become **unconscious from long-continued constipation**. A physician relates a case in which unconsciousness, with stertorous breathing in the night, simulated an apoplectic attack. By the aid of mustard to the feet and abdomen, with ice to the head, and a large enema of soap, water and castor oil, a large evacuation was procured, with speedy return to consciousness. —*Health Magazine.*

Headaches of nasal origin are commonly present in the morning on awakening; those due to eye strain come on later in the day and after using the eyes.—*Medical Summary.*